



A Discovery—the Baby Pigeon.

PLATE I.

*[Frontispiece]*

# NURSERY SCHOOL EDUCATION AND THE REORGANIZATION OF THE INFANT SCHOOL

BY

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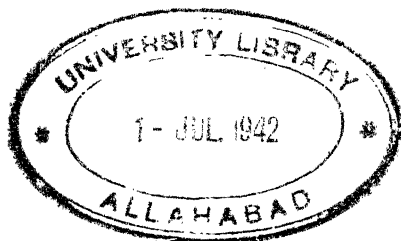
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## P R E F A C E

THIS book is the outcome of a course of lectures on Nursery School Education, given to Infant School teachers, at the University College, Cardiff. The large numbers who attended the series and the interest shown in the Nursery School movement suggested that the time is now ripe for a reorganization or a re-shaping of the Infant School in the light of Nursery School principles. In the education of young children, the emphasis should no longer be placed on *instruction* and *learning*, but rather on *growth* and *living*. It is in the hope that other teachers, parents, and members of Education Authorities may realize the possibilities of this change of emphasis that we have ventured to give these lectures a more permanent form.

With the co-operation of many colleagues at work in Nursery Schools it has been possible to select illustrations which make the main features of Nursery School education stand out clearly. In particular, grateful acknowledgment is due to the following for permission to reproduce photographs or illustrations :

Chelsea Open-air Nursery School, Plate XIII (b).

*Daily Sketch*, Plate XII (a).

Fortis Green School, Plate XVI (a).

Fox Photos, Ltd., Plates IV (b), VII (b).

Lilycroft Nursery School, Bradford L.E.A., *Frontispiece*, Plates III (b), V (a), VI (b), VII (a),

IX, X, XIV (b), XV, XVI (b).

London County Council, Plate XI.



Nursery School Association, Plates IV (a), VII (b), XII, XIII (b), XVI (a).

Palmerston Nursery School, Manchester L.E.A., Plates II (b), XIII (a).

Rudolf Steiner Nursery Class, Plate VII (b).

Salford Nursery School, Salford L.E.A., Plate VIII.

*South Wales Evening Post*, Plate XIV (a).

Swansea Nursery School, Swansea L.E.A., Plates IV (b), XIV (a).

Ynyscynon Nursery Infant School, Rhondda L.E.A., Plates II (a), III (a), V (b), VI (a).

It is with gratitude that we acknowledge the help that we have received from Miss Grace Owen, Honorary Adviser to the Nursery School Association, who kindly read the draft before publication and made many valuable suggestions ; from Miss M. E. Eggar for advice and encouragement ; from Miss Miriam Lord, for most generous help in regard to illustrations ; and from the University of London Press, which has given advice and aid in many different directions. Our thanks are also due to Dr. Mina Moore and to Dr. George Seth, for aid in proof-correcting ; and to Mr. W. J. Davey and Miss Ann Vaughan, for help in many ways, including the making of the index.

O. A. W.

I. G. E.

CARDIFF,  
June 1939.

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*PART I*

THE PRINCIPLES UNDERLYING THE  
NURSERY SCHOOL

By OLIVE A. WHEELER



## Chapter I

### THE PRESENT OPPORTUNITY. NURSERY SCHOOL EDUCATION FOR ALL?

*"Educate each child as if he were your own."*—RACHEL  
McMILLAN.

ONE of the most distinctive features of the British tradition of education has been the recognition of the importance of preparatory training in infancy for later and more formal education. As early as 1816, Robert Owen founded at Lanark a "preparatory or training school" for infants whose parents were at work in the local cotton mills. The age range of the children admitted to this school was from one, or "as soon as they could walk," to six. They were not formally instructed, but were allowed to play in the open air when the weather permitted. There were no punishments; nor were the children "annoyed with books."<sup>1</sup> The aim of the founder was clearly stated to be to prevent the children from acquiring bad habits, to give them good ones and to form their dispositions to mutual kindness.

Although, on the Continent, J. F. Oberlin had anticipated by almost half a century Owen's institution of the Infant School, early developments in this country seem to have been largely independent of the Continental movement. The idealism of Robert Owen, the practical work of James Buchanan, first at Lanark and later in London, and the missionary zeal of Samuel Wilderspin for the education of young children, soon resulted in the founding of many Infant Schools in

<sup>1</sup> *The Life of Robert Owen*, by Himself, 1857.

different parts of the country. By 1870 their educational value was so generally recognized that the age of five (and not six as was usual in other countries) was adopted in the Education Act of that year as the age of entry into school. Only a few years later the age of three was fixed as the minimum age at which children in attendance could count for grant. Infant Schools thus became an integral part of the State system of education.

The early official recognition of Infant Schools undoubtedly aided their spread and development, but obviously it has not been without drawbacks. It has meant close association with schools for older children, where more formal work is being done, and a consequent pressure from above tending towards an over-emphasis on the three R's and a distortion of the distinctive "nursery" character of the training suitable for the early years.

The system of "payment by results," introduced in the Revised Code of 1862, further prejudiced the chances of development of appropriate nursery methods. This system, under which the older children in the Infant Schools were individually examined in Reading, Writing and Arithmetic, the grants paid being dependent on the number of passes obtained, certainly had the desired result of effecting immediate economies in expenditure, but at the cost of hindering for many years the process of adjustment of Infant School education to the real needs of young children. Perhaps, on this account, outstanding developments like the theories of Froebel and the Kindergarten methods associated with his name had less influence

on Infant School practice in the latter half of the nineteenth century than might have been expected from the interest shown in his system in the fifties.

That Infant Schools had largely lost, or had never attained, their true "nursery" character is clear from the enquiries of the Women Inspectors of the Board of Education, who reported in 1904 that children of three, four and five years of age were made to spend weary hours on the three R's and on "needlework with No. 6 needles." The sanitary arrangements were totally unsuitable for the babies' class, and there was no sleeping accommodation available. The children were expected to sit still, with arms folded, in rows in large galleries, and were mainly occupied with mechanical repetition. There were occasional fatuous object lessons, in which pictures and museum specimens took the place of living plants and animals, and during which the infants, while not allowed to converse with one another, were required to answer "in a complete sentence" every question put to them by the teacher. There were few opportunities for physical activity, first-hand exploration of the real world or individual work; and the discipline, in large classes confined to small spaces, was necessarily rigid.

After this travesty of infant education, it was only to be expected that the Consultative Committee of the Board of Education, which was commissioned to report on this problem in 1907, should have laid down the principle that the proper place for children under five was the home, except where conditions were very unfavourable, when it recommended the institution of Nursery Schools. As a result of this



report, some Authorities ceased to make provision for the under-fives ; and thus the percentage of children between the ages of three and five in attendance at Infant Schools steadily declined during the first three decades of this century.

Even before the close of the nineteenth century, there had, however, been interesting experiments in infant education outside the official system. For example, the interest of enlightened educators in the views and methods of Froebel, and the natural desire of parents to give their own children the best possible early training, led to the setting up, by private effort, of Kindergartens for fee-paying pupils. In many of these, freer and more appropriate methods of educating young children were tried out. In time, the establishment in this country of the Froebel Society and of the National Froebel Union not only continued to direct attention to Froebel's views of child education, but also led to the institution of valuable schemes for the training of Kindergarten teachers.

Unfortunately, in some Kindergartens and Training Colleges there was for a time a tendency to lay too much emphasis on the actual Froebel "gifts," and to stereotype methods and practices which embodied the letter, rather than the spirit, of Froebel's teaching. It required the philosophical insight of John Dewey to separate the educational principles, which are of permanent value, from their accidental accompaniments. By the end of the nineteenth century, however, his constructive criticisms had done much to deliver the Kindergarten world from dangerous misunderstandings and misapplications of Froebel's views.

In this country there were a number of private Kindergartens (some of which were associated with Girls' High Schools) which embodied enlightened views of child education and were staffed by teachers who had a real understanding of the needs of young children. The pupils were in the main drawn from superior homes: and it is interesting to notice that their enlightened parents did not subscribe to the view that "the proper place for children under five is the home," but were actually willing to pay fees for the Kindergarten training which they regarded as a necessary supplement to home care.

Later, by philanthropic effort, there were established a number of Free Kindergartens, the earliest of which were in Salford (Manchester), Woolwich, Edinburgh, Birmingham, Notting Dale and Somers Town: and it gradually came to be realized that enlightened and psychologically sound methods of early education ought to be used with all children, irrespective of their parents' ability or inability to pay fees. Out of this realization developed the British Nursery Schools as we now know them.

One of the best known of these was founded in Deptford in 1911 by Rachel and Margaret McMillan, who were inspired with the great educational commandment: "Educate every child as if he were your own." These pioneers believed that although families living in slums, in cramped houses or tenements, could not have private nurseries and nurses, the young children from such homes could be given a fair start on the high road leading to physical, mental and moral health by the provision of properly staffed community

nurseries and gardens. Notwithstanding financial difficulties, since at first no Government grants were available, they succeeded in demonstrating both the value and the practicability of the large Nursery School. Other pioneers experimented, mainly with smaller Nursery Schools ; and thus there developed in this century a new living tradition of Nursery School education.

A Nursery School is not, of course, a place for formal education ; but neither is it merely a clinic for the medical supervision of young children. It is a community nursery, in a garden, where children between the ages of two and five (or in some cases two and seven) from surrounding homes can be given appropriate opportunities for many-sided growth ; where they can enjoy the sunlight, and play freely in the open air or in shelters designed for the purpose ; and where they can be properly fed, medically supervised and have the rest which they so much require at this stage of their development. It is a controlled environment, suitable for the period of infancy, so that young children may exercise their growing powers of mind and body in free play and in the exploration of the properties of plants, animals and other interesting objects. Without any forcing, it provides opportunities for their training in habits of cleanliness, orderliness, good speech and consideration for others. Obviously space, both indoors and out, is essential : and adequate staffing. Usually each playroom, designed for 30 to 40 children, is in the charge of a qualified teacher, with several helpers. It is self-contained in regard to cloakroom, washing and sanitary arrange-



In the Garden.  
At Play Indoors.

PLATE II.



ments. It opens on to the garden and is furnished with appropriately sized and coloured tables and chairs, cupboards containing toys and varied play-materials, a piano, and with pictures and perhaps children's blackboards on the walls. This is the real educational unit; but sometimes three, or even four, such units in one garden, under the supervision of one superintendent, have a common kitchen, medical inspection room and staff room, and thus together constitute the Nursery School.

It was only natural that, inspired with the great conception of the Nursery School, Margaret McMillan and other pioneers in the movement should have looked askance at, and indeed been afraid of, the attenuated idea of the Nursery Class attached to the Infant School. In those early days there was a very grave danger that the recognition of the Nursery Class as "good enough" would have smothered the sacrificial flame of the Nursery School movement and would have resulted in a still-born, instead of a living, Nursery School tradition.

Now the case is different. At least 130 Nursery Schools have been established in different parts of Great Britain, some by voluntary effort and with the aid of grants from the *Save the Children Fund*, and others by progressive L.E.A.s under the provisions of the Fisher Act of 1918.<sup>1</sup> The first two

<sup>1</sup> In the last report of the Chief Medical Officer of the Board of Education, the number of Nursery Schools in England and Wales recognized by the Board of Education was stated to be 107, with accommodation for 8,274 children (*The Health of the School Child*, H.M.S.O., 1938). In addition there were 23 Nursery Schools in Scotland (*Encyclopædia Britannica Book of the Year*, 1938). A number of proposals for new Nursery Schools were also under consideration.

women M.P.s in this country—Lady Astor and Mrs. Wintringham—have played notable parts in this work of encouragement and expansion. The early development of special courses of training for Nursery School teachers by Miss Grace Owen at the Mather Training College, Manchester, Miss McMillan at Deptford, and Miss de Lissa at the Gipsy Hill Training College, London, following the valuable work in the training of Kindergarten teachers encouraged by the National Froebel Union and especially at the Froebel Educational Institute, also helped to make the Nursery School tradition vigorous and articulate.

The Nursery School Association, founded in 1923 with Miss Margaret McMillan as first President, Mrs. Eveleigh as first Chairman and Miss Grace Owen as Honorary Secretary, has already succeeded in interesting the general public in the newer views of child nurture; and the Nursery School tradition is thus rapidly becoming sufficiently widespread and powerful to be able to influence educational policy and practice.

When the Consultative Committee of the Board of Education issued its report on *Infant and Nursery Schools* in 1933, and recommended that local education authorities “should survey the needs of their area, with regard to home conditions and the wishes of the parents; and, after consultation with the Board of Education, should take such steps as may seem to them desirable to provide in schools nurture and training for children below the age of five,” it was realized that this constituted an unprecedented opportunity for a real improvement in the foundations of

existing health and educational services, provided that the principles underlying the Nursery School could be applied to the extended provision under consideration. As a first step towards seizing this great opportunity, it is necessary to try to clarify these principles so that they may be applied also to existing Infant Schools, in many of which at present, owing to the decline in the school population, there is space and the chance of reconstruction to meet the needs of young children.

To this end, parallel movements in other countries may prove illuminating. In Italy, the experiments of the Agassi sisters in providing little children with opportunities to play freely and to engage in such purposeful activities as washing themselves, laying and serving meals, sweeping and dusting the playrooms, led to the institution of "Children's Houses," even before Madame Montessori made her great scientific contribution and developed her distinctive methods of educating young children.

France, which can legitimately claim the first experiment in Infant School education, that of Oberlin in 1769, has developed as part of its official system *Les Ecoles Maternelles*, which in general conception are much nearer to the Nursery than to the Infant Schools of this country. The age range of the children in attendance is from two to six. Emphasis is laid on the health, medical supervision, cleanliness and proper nutrition of the children : and the co-operation of the mothers is actively encouraged. There is no artificial division between nurture and education in these schools. In general, they seem to be the embodiment of a much clearer and more adequate conception of



the kind of State Service which should supplement home care in the early years, than is implied in the British Infant School system. Although, in France, attendance at school is not compulsory until six, whereas in this country it is compulsory at five, the proportion of children attending *Les Ecoles Maternelles* between two and six compares favourably with the percentage of children of the same age range in attendance at Nursery and Infant Schools in Great Britain.

In America, the Nursery School movement has spread rapidly. While Nursery Schools of the permanent type have increased gradually from 76 in 1927 to 285 in 1936, the emergency Nursery School programme of the Works Progress Administration resulted in the establishment, by October 1937, of 1,481 Emergency Nursery Schools in 48 States.<sup>1</sup> As a result, there is a strong tendency, reinforced by recent psychological discoveries, to organize infant education in America so that formal work in the three R's is deferred until the age of six or seven. The ideal suggested by scientific researches and sanctioned by Nursery School practice is that each individual should receive this training when, and not before, he or she attains the *mental* age of six and a half. At this stage of intellectual development there is natural interest in the three R's; and the process of learning is consequently unstrained and rapid.

From a comparison of the Nursery Schools of different countries it will be evident that the chief difference between Nursery and Infant Schools turns

<sup>1</sup> *Encyclopædia Britannica Book of the Year*, 1938.

on the different emphasis which is placed on the *growth* of infants and on their *instruction*. The Nursery School aims at supplementing home care so that healthy and many-sided growth is encouraged. In this larger task instruction takes its right and subordinate place. On the other hand, the Infant School has been more concerned with instruction, with the three R's and with preparing children for the Junior School. It is in the "scholastic" tradition.

Recently there has been evident in some quarters a dangerous tendency to regard the Nursery School as a kind of "Special School" for delicate children. Perhaps the placing of Nursery Schools, for administrative purposes, under the Medical section of the Board of Education has tended to foster this view. Indeed, in a 1936 official publication, Nursery Schools were explicitly defined as having "as their primary object the physical and medical nurture of the debilitated child."<sup>1</sup> There are two misconceptions which might arise from this description and which it is important to guard against at this juncture, when the larger conception of Nursery School education is about to impinge on, and to modify, the older Infant School tradition. In the first place, there is the implication that Nursery School education is only necessary for debilitated children; and secondly, that it is mainly concerned with the bodies, and not the minds and characters, of children.

The view that the Nursery School exists for the cure of debilitated children entirely misses its wider possibilities as a preventive measure against subsequent

<sup>1</sup> *Nursery Schools and Nursery Classes*, H.M.S.O., 1936, p. 6.

ill-health. Yet, during recent years, scientific evidence concerning the developmental significance of the early years of life has rapidly accumulated ; and it is being increasingly realized that infancy is undoubtedly a critical period in the lives of the great majority of individuals. Not only does it come first after the shock of birth, but it happens also to be characterized by greater rapidity of growth (both physical and mental) than is found at later stages.

According to the calculations of Gesell, there are in America ten times as many deaths among children during the five pre-school years as in the ten years of school life. In many other cases, infancy is the age of damage, if not of death. Sir George Newman, who was formerly Chief Medical Officer of the Board of Education, repeatedly drew attention to the evidence collected by the School Medical Officers of this country which led him to the conclusion that a large proportion of children admitted to school at the age of five suffered from ailments and defects, most of which could have been avoided by wise nurture in the pre-school years. He was therefore convinced of the need for a network of Nursery Schools, which children from the age of two could attend, as a preventive measure against such damage. It is indeed illogical for this country to spend vast sums of money on a "Keep Fit" campaign, without laying the foundations for fitness by right nurture in the early years. For how can a population be *kept* fit if it has never *been* fit? Inadequate or inappropriate nutrition in the early years often has far-reaching consequences : and the lack of medical supervision of the majority of

children between the ages of two and five, when the first routine school inspection now takes place, undoubtedly constitutes a fatal gap in the public health services of this country.

The second implication that the Nursery School is concerned with the bodies of children seems to presuppose that bodies and minds are separate entities. Actually individuals are always body-minds, and never bodies divorced from minds, nor minds functioning *in vacuo*. Consequently it is the primary object of the Nursery School to supplement the home in providing the necessary conditions not only for bodily but for all other aspects of child development, including the most important of all, that of character. At a certain stage the community life of the Nursery School which provides opportunities for the practice of co-operation is an essential condition of the further social and moral development of the individual.

Our failure to provide the necessary conditions for the harmonious growth of so many young children has other disastrous consequences than that of physical unfitness. Disharmonies in mental development, repressions, social maladjustments and other deviations from the normal can usually be shown to have originated in the period of infancy. It was this that led Adler to make the startling statement, "Early childhood almost settles the life-plan." Many of these failures of development might have been avoided if the adults responsible for the upbringing of children had had a deeper insight into the conditions of mental health, and a greater knowledge of the laws governing the many-sided development of infants. The truth is

that not only our public health, but also our existing educational, services are all too frequently "receivers of damaged goods"; and it is more than doubtful whether formal teaching at later stages can ever eliminate the effects on mind and character of an unsuitable environment and of unwise treatment during the impressionable pre-school years.

The provision of an appropriate environment to aid the many-sided growth of infants, far from being a luxury, is a necessary preliminary to obtaining a full measure of success from later educational efforts. No one can deny that many homes, both rich and poor, fail to provide adequate conditions, and therefore need to be supplemented by private or public effort. In some cases the parents have not the means to provide suitable food; in others it is impossible for them to provide space and appropriate play-materials. In most working-class homes the mothers are too harassed by domestic duties to answer the questions arising from their children's curiosity or to give the necessary encouragement to their desires to play, construct and experiment. In other homes, both rich and poor, child-companionship may be lacking; or the adults responsible may have little understanding of the difficult art of child nurture. In all these cases, the Nursery School, by supplementing the home, can ensure that the children in attendance enjoy the beauty, space, rest, play, freedom, companionship and community life which they need at this stage, just as much as they need suitable food, fresh air and sunlight.

The Nursery School has, then, as its primary object, the harmonious and many-sided growth of individuals

(whether temporarily debilitated or healthy, rich or poor), during the critical period of infancy.

In view of the existing Infant School system it would, however, be wasteful and indeed absurd to endeavour to set up *ab initio* a sufficient number of Nursery Schools to meet the needs of the infant population of this country. What is necessary is that the Infant School should be reconstructed and modified in the light of the principles underlying the Nursery School experiments.

This will mean something more than the provision of a Nursery Class, with the bare essentials described in a recent official publication as “(i) adequate and suitable space, indoors and outdoors; (ii) adequate and suitable cloakroom, lavatory and washing accommodation with hot and cold water available; (iii) the means of preparing and serving a simple mid-morning lunch in a civilized way; (iv) beds for use during a rest period; (v) adequate and suitable play material.”<sup>1</sup> It should certainly mean the proper staffing of that class and of the whole school with specially trained teachers and with additional helpers, so that each child may have the supervision, understanding and encouragement, as well as the freedom and activity, which he really needs. More harm than good will come of providing nursery equipment, if young children still have to be herded together in large groups, confused or over-stimulated, and are lacking in what is essential, namely, the individual care and the peaceful atmosphere of the nursery.

The age of admission is another great difference

<sup>1</sup> *Nursery Schools and Nursery Classes*, H.M.S.O., 1936, pp. 18-19.

between the Nursery and the Infant School, and is still a subject of much controversy. In support of the Nursery School practice of admitting at two it is argued that it is only by right nurture and medical supervision between two and three that in many cases later disaster can be avoided, and the present fatal gap in the public health services be effectively bridged. On the other side, it is affirmed that children of two are not ready to leave their mothers for the companionship of other children and for life in a community. The truth is that it is impossible to make one generalization to cover all cases, for not only does the rate of development (including the growth of independence and other social developments) vary from child to child, but the home conditions also are so different in different cases that flexibility of practice will be necessary to meet the great variety of needs of young children. One home may have the necessary equipment and space, both indoors and in a garden, for a young and active child to play in safety. Another may consist of only one or two rooms, and play in the open air may be possible only on the doorstep or in the gutter : in this case there must either be continual restriction of the child's growing powers and creative activities or danger to his life. One mother may have the time and ability to devote to the nutrition, play activities and training of mind and character of her two-year-old. Another, through ill-health, excessive domestic and other duties, lack of understanding or even the addition of a baby to the family circle, may be unable to do justice to her child of similar age. It is no doubt undesirable to have two-year-olds in large

groups in a Nursery School ; but in small numbers, especially if they are free to wander in and out, to watch and listen to the threes and fours, they may be greatly helped in their discovery of the real world, in the acquiring of language, in the growth of independence and in the practice of co-operation. Both the Nursery and the reorganized Infant School should therefore be free to admit at two, where there is evidence of need either through home conditions, or individual characteristics, though in the majority of cases such early entrance may be unnecessary.

More than this, throughout the whole Infant School, and not only with the babies, there should no longer be an artificial separation of nurture and education. An experiment was recently conducted by members of the National Institute of Industrial Psychology in which a group of Infant School children of five to six years of age, below the average in intelligence, and coming from poor homes, were given a dietetically balanced breakfast, and their progress in school subjects (English, poetry and arithmetic) was compared with that of a similar group who continued to be fed at home. Although the experiment was on a small scale, and can therefore only be regarded as preliminary to a wider investigation, the authors believe that an improvement in nutrition at this age, such as would result from the providing of a better breakfast, will effect at least a 10 per cent. improvement in mental output and in school progress.<sup>1</sup> In some areas, where, owing to widespread poverty or unemployment, there

<sup>1</sup> A. H. Seymour and J. E. F. Whitaker, *An Experiment on Nutrition*, Occupational Psychology, Summer, 1938.



are serious difficulties in regard to nutrition, the ideal provision would therefore seem to be the Nursery-Infant School, where children may be admitted at two and remain until after seven, and where the older, as well as the younger, children may be medically supervised, and their scanty home diet be supplemented by appropriate school meals.

In a note at the end of the Report on *Infant and Nursery Schools* one member of the Consultative Committee, Miss Freda Hawtrey, put forward a very strong plea on general grounds for extending the period of Nursery School education from five, which is usually its upper limit, to seven plus, that is, to the beginning of the Junior School stage. She maintained that continuity of treatment from two to seven, without a sudden change of environment at five, is educationally desirable. "Nothing is secure at five," she said, "though without a break much might be established by seven." Experiments in combining Nursery and Infant Schools and thus extending the age range of children in attendance at one school from two to seven had already been tried out, for example, at Princeville, Bradford, and at Ynyscynon, and had revealed the practical advantages of such continuity of nurture and education.

There is, however, one grave danger to be guarded against in the Nursery-Infant school. Regular work in the three R's, for which the over-sixes may be ready, should not be allowed to filter downwards, and thus distort the true nursery character of the pre-lesson stage of education. Perhaps the simplest way to prevent this would be by raising the age of *compulsory*

attendance at school from five to six, as is usual in America and on the Continent, and to postpone the regular teaching of the three R's until the age when all children can be reckoned to be in attendance. In the earlier years of *voluntary* attendance there would, of course, be occupations and play-material, introducing and arousing interest in Reading, Writing and Number, but such preparation for later developments should be incidental and not formal.

In general, throughout the reorganized Infant School, emphasis should be laid on many-sided growth and not on instruction. The numbers assigned to each qualified teacher (with helpers), the methods of discipline and the organization of the school should be appropriate to the needs of young children. The separation into age-groups, which is usual in existing Infant Schools and which often prevents members of the same family from playing together, is neither necessary, when nursery methods are being used, nor is it desirable for the social development and the training in mutual helpfulness of young children. It is only when systematic teaching becomes appropriate that grading of this kind can be justified, and then largely as a means of economy of the teacher's time and powers. Indeed, notwithstanding both the weight of accumulated custom and the demands of the Junior School, the transition from play to work methods should not be effected too early, nor be too abrupt; and the period from five to seven plus should be regarded as a transition from nursery to school.

It is fortunately true that Infant School teachers have developed their technique considerably in recent years

and, as a class, are receptive of new ideas ; but the conditions under which most of them work are still hopelessly out of date. Over-large classes, dingy classrooms, often poorly ventilated and seldom having free access to the open air, concrete playgrounds, inadequate and unsuitable washing, sleeping and sanitary arrangements, a deficiency of play-materials, plants and animals and an over-formal tradition still make it difficult for enlightened teachers to employ appropriate "nursery" methods of education. The recognized size of Infant School classes is still officially placed at the absurd maximum of 50: and new schools are even now being built to herd together large numbers of young children in comparative immobility in indoor classrooms, notwithstanding the overwhelming medical and psychological evidence in favour of free play, open-air conditions and small educational groups. An analysis of the principles underlying the Nursery School may therefore prove useful in giving a clear lead to teachers and authorities in the work of reconstruction and reorganization which must now be undertaken so that the Infant School may be made to fit the needs of young children and thus become an effective foundation of the health and educational services.

## Chapter 2

### THE BASIC NEEDS OF THE NURSERY SCHOOL CHILD

*"Obviously there is a vital impulse . . . something which ever seeks to transcend itself . . . in a word, to create."*—H. BERGSON.

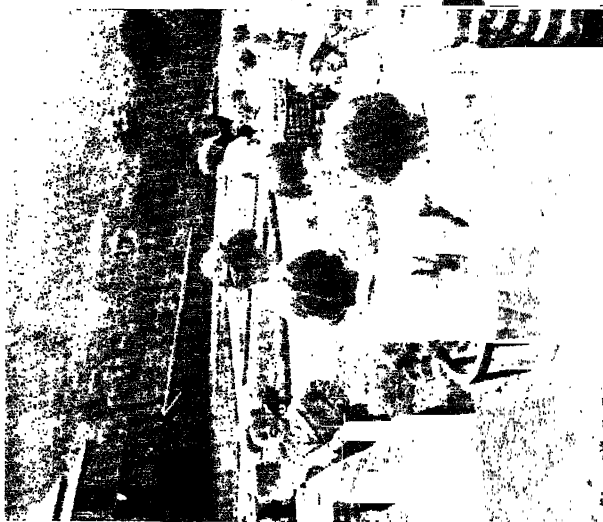
FROM the consideration of the Nursery Schools of various countries one conclusion has been drawn, namely, that the Nursery School has as its primary object the harmonious growth of individuals during the critical period of infancy. The study of the laws of growth, especially during the pre-school years, will probably supply the key to the principles underlying the Nursery School.

The growth of even the simplest of living organisms seems to be supra-mechanical. The newt, which loses a limb through violence, can proceed to grow another. Unlike a machine, it can, within limits, repair its own injuries. There appears, then, to be a creative impulse within a living organism which makes for perfection and wholeness and which, while utilizing the environment, directs development from within. In the case of the human individual it is obvious that environment, especially social environment, plays a large part in the process of development; but in training the young child the first condition for mental and moral health is, nevertheless, respect for the life-impulse within. Just as the wind needs to be tempered to the shorn lamb, so the full pressure of social conventions should not be allowed to fall too heavily or too suddenly on the sensitive developing infant. The dynamic impulses within the child should neither be repressed

nor forestalled. The educator's business is to provide the appropriate environment for each individual, so that the creative process of growth may not be violated, but may be fulfilled.

In order to plan the right conditions for growth for the youngest children admitted to a Nursery School—the two-year-olds—it is necessary to consider first whether the life-impulse within the individual expresses itself in predetermined patterns of behaviour, and, if so, what bearing this should have on early training. In the psychological world there has recently been much discussion and controversy concerning the human appetites and instincts. It will not be necessary here to deal in detail with the views of different psychologists, but it is of the utmost importance that the educators of young children should understand the significance of the recent trends of psychological opinion in this field of enquiry.

It is generally agreed that the appetites—hunger, thirst, elimination, sex, the urge for movement and for rest—which are all closely connected with the biological functions of the organism, are the starting-points of human development and the earliest drives of the learning process. It is a fatal mistake to regard these appetites as merely physical: each has a mental side, and indeed directs the acquiring of experience in the early stages. For example, suppose that a young child's attention is claimed by many competing stimuli: a sunset, a masterpiece of literature, a work of art, the sounds of voices and of music. It needs no great prophetic insight to predict that, if that child is hungry, and if a bottle of milk is brought within his range of

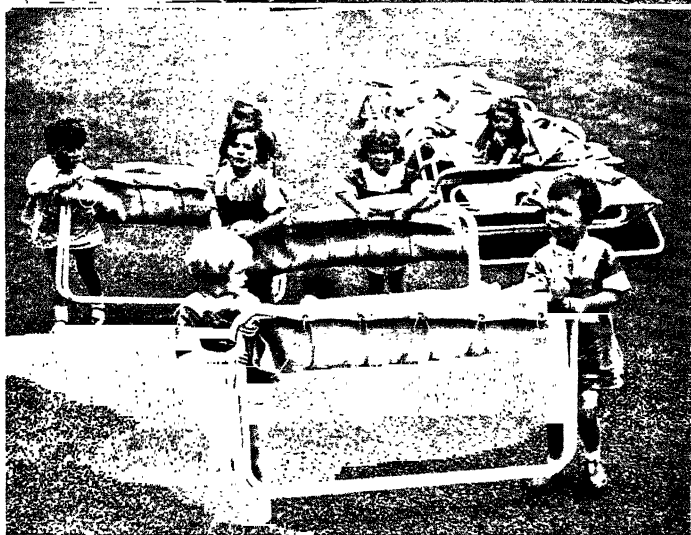


A Meal Out of Doors.



Washing up Afterwards.

PLATE III.



Rest.  
Clearing up Afterwards.

PLATE IV.

observation, he will attend to it to the exclusion of the other competing stimuli. Hunger not only tends to the obtaining of food and to the maintenance of the body, it leads also to certain kinds of behaviour and to the directing of attention to certain objects which can satisfy it. In short, it is psycho-physical.

Even in adult life the primitive appetites direct attention and profoundly influence the mental processes of individuals. For example, a half-famished prisoner of war relates how he and his companions experimented with the division of their inadequate daily rations. They tried dividing their food into two or three parts, reserving one or more parts for later use. They found, however, that it was wiser to have one good meal at the beginning ; for, so long as any food remained, it was practically impossible to forget it and to attend for long to anything else. At night several of their number repeatedly dreamed of seven-course dinners and similar satisfactions, the hunger-appetite apparently having power to influence imaginative processes, as well as to direct observation and learning.

In the light of these facts it is amazing that little children should ever have been expected to attend to formal work when the fundamental needs of their organic life were left unsatisfied. Yet, until the passing of the "Provision of Meals" Act, there was no official recognition of the truth that hungry children could not be expected to profit by instruction in Reading, Writing and Arithmetic. Even now some teachers of infants do not realize how the appetite of hunger, for example, directs the powers of attention



and learning in the early years. The efficacy of A B C biscuits in helping past generations of children to learn the alphabet, always supposing that it has to be learned, is an illustration of a generally sound educational principle, namely, that infants can easily be interested in any object that is intimately associated with the satisfaction of the drive of hunger.

The regular provision of meals in a Nursery School is therefore not unimportant, nor accidental. The procedure will naturally vary according to the conditions of the parents and the nature of the homes from which the children are drawn. But, in all cases, by the provision of a meal, or meals, in the Nursery School, the two-year-olds can be readily trained to eat what is required for their bodily health, to use appropriate implements and methods of eating, and, if the equipment is of the right kind, to learn their first lessons in independence and orderly social co-operation. At a later stage some will lay the tables in preparation for the meal ; others will help to serve it ; and afterwards some will help with the washing-up. They will thus be gaining manual dexterity and control of bodily movements, and will also be receiving a training in orderliness and social service.

Similarly, the provision of sufficient and appropriate washing and sanitary arrangements is essential in a Nursery School or reorganized Infant School ; for by means of it children can be trained in habits of cleanliness, and thus lay the foundations of later physical and mental health. At the same time they will discover for themselves the properties of soap and of water—an object of never-failing interest to the young child—

and will learn valuable lessons in control and independence.

The need for food and drink and the closely related need for elimination are common, in a variety of forms, to all living organisms. So also is the drive of sex. The animal class alone, however, is distinguished by powers of free locomotion; whereas the vegetable "stays put," and can grow and reproduce its kind without free movement. It took a surprisingly long time for educators to realize *in practice* that the human infant belongs to the animal class, and that any intelligent attempt to "follow nature" in his education must start from the recognition of his fundamental need for bodily activity and free movement. The galleries in which infants were expected to sit still in rows, keeping their arms folded, were commonly used in this country until the end of the last century. Occasionally a wriggler fell from his place and rolled down the gangway, but his bumps and bruises were regarded as just punishment for his "naughtiness." The Inspector who in the nineties commended a certain Infant School because the children in it were "as orderly and well-behaved as the bedded-out plants in Hyde Park," like so many of his contemporaries, had not realized the full implications of the very obvious truth that the infant belongs to the free-moving animal, and not the "stay-put" vegetable class.

To run, to jump, to skip, to climb, to find things out by movement and to enjoy exercising the different parts of the body is the life of early childhood. In the Nursery School this is clearly recognized; and appropriate and varied opportunities for free activity

under conditions of safety are provided at all stages both in the play-shelters and out of doors. The garden has long paths for running, steps for climbing, earth and a sand-pit for digging, slides and low rib-stalls, and a jungle-gym, as well as trees, flowers, a kitchen garden, an aquarium and other provision for the keeping of pets.

The two-year-olds, who are naturally less confident in their movements than the older children, usually have a special shelter, and a part of the garden reserved for their use at certain times, so that they are not discouraged from active exploration of the environment by the more vigorous play of the others. But there is nothing rigid about this, and frequently brothers and sisters of different ages look after one another and play together.

It is not only necessary for the development of young children that they should have plenty of movement. It is equally important that their activities should be self-selected, within the limits of safety. In some of the Infant Schools of the last century tiny children were sometimes given thimble drills and exercises for holding pens and knitting needles. Such weary repetitions, imposed from without, tend to repress, rather than to encourage, the harmonious growth of the individual; whereas activities chosen through interest satisfy real needs and lead to further development of mind and body.

Equally fundamental to the need for change and movement is the complementary need for rest and sleep. There should therefore be provision in the Nursery School and the reorganized Infant School, not

only for free movement, but also for rest periods especially for the younger children. There should be suitable equipment provided, such as beds and blankets, for the satisfaction of this basic need: and a large part of the training in the afternoon session should centre round the preparations for rest and the dressing and clearing-up afterwards.

There is considerable disagreement among psychologists concerning the part played by the sexual appetite in the early years. Freud holds that even before Nursery School age it plays an important part. He affirms that at an early stage, before feelings of shame and disgust arise to check the primitive impulse, children frequently stimulate their sex organs and find pleasure in so doing. On the other hand, Dr. Ian Suttie has recently put forward a well-reasoned case in support of the view that the primal need of the infant is for love of a non-sexual kind, for the responses of the mother and the security which they bring. This need to love and to be loved is as fundamental as is the need for food. It is the thwarting of this impulse or interference with its natural development which so frequently leads to mental and moral ill-health. Sex-love is a later derivative of, or substitute for, this early tendency to love.

Suttie's general view, arrived at through his experience in dealing with neurotic cases, would be accepted by most observers of the behaviour of ordinary children. In the majority of cases the sex appetite, as such, does not appear to begin to function before about the age of eight, and for some time afterwards it is weak and vaguely directed. In infancy

it appears to be inoperative, though elements seem to be present separately, which later become combined into the configuration recognizable as the sex-impulse of the adolescent or the adult.

One of the most important functions of the Nursery School is to provide and maintain a reassuring human environment for each child, when exclusive attachment to the mother can no longer be continued. The atmosphere of serenity and love, the companionship of equals and the interesting adventures that become possible in the appropriate environment of the Nursery School are necessary for the healthy development of the "love" appetite of the individual. There should be a natural broadening of interest and affection, taking in Nursery School teachers, other children and pets, as well as the parents. Active curiosity concerning birth and sex may arise in young children, and, if so, should not be repressed. Questions asked should be dealt with frankly, and without tension or embarrassment—just as other questions are answered at this stage. Most of the difficulties which arise later can be traced back to the irrational attitudes of adults, many of whom attempt to hide in the darkness of a primitive taboo all matters relating to sex and the creativeness of life.

In addition to the appetites, there appear to be other early patterns of behaviour in the human individual, such as pugnacity, curiosity, construction, acquisition and imitation. These are believed by some psychologists, notably by McDougall and Drever, to be inherited psycho-physical dispositions, which determine their possessor to know certain objects, and to

feel and tend to react towards them in certain ways. By other psychologists they are regarded as early, though not innate, tendencies arising out of the more primitive appetites with the growth of experience. For example, the instinct of acquisition might be regarded as a modification and development of primitive hunger reactions, other objects than food being collected. Similarly, pugnacity might be interpreted as arising out of the thwarting of the desire for food or for free movement. In any case, whatever be the final issue of the theoretical controversy concerning the nature of the human instincts, there can be no doubt that they are early expressions of the life-impulse, and as such affect behaviour and guide the further acquiring of experience. Their dynamic force should therefore be utilized, as occasion arises, for educational purposes.

The general significance of the modern psychological view of the human appetites and instincts is then obvious. Since the appetites are the earliest expressions of the life-impulse within the individual and have tremendous dynamic force, the training of children in the early years should centre round them. Adults who are responsible for the upbringing of infants therefore need to know how these appetites function, what is their natural rhythm, in what ways desirable modifications may be encouraged and serious maladjustments be avoided. Mental, as well as physical, health in the early years is bound up primarily with the development of wholesome controls of these appetites. When other more complicated impulses or "instincts" appear, they also must be recognized and

their dynamic energy be utilized for the further physical and mental development of the individual.

Practical experience in the Nursery School bears out the conclusion that might have been expected from these psychological views, namely, that children at this stage will be interested in anything connected with the satisfaction of their appetites or instincts. Boredom usually comes from a failure to see the purpose of the occupation in which one is expected to engage; and the satisfaction of an appetite or instinct seems worth while even to the very young child. For example, so central is the appetite of hunger, that the purpose of all duties connected with the provision and service of a meal is evident even to the limited experience of the under-fives. The work of the farmer, the cook, the baker and the milkman, the potatoes in the garden and the cows in the field are all interesting, for they are indirectly associated with the satisfaction of hunger and appeal to the child's instinct of curiosity.

Similarly, if an individual has a strong impulse to construct, and is provided with bricks or other suitable material, he will learn to co-ordinate hand and eye movements, to balance the bricks or fit them into a pattern, and to estimate their size, shape, number and other properties. If, on the other hand, he is denied legitimate opportunities for the satisfaction of this impulse he will probably give trouble. If he is taken to church and is expected to remain passive during a sermon, he may be found constructing trains out of hymn-books or a rabbit out of his pocket-handkerchief. It matters little whether the urge to construct is innate

or is a later complication of the primitive appetite for movement. Whatever its origin, when it exists it appears to be dynamic, and consequently should be used as a drive of the learning process.

What is true of hunger and construction is true also of the other appetites and instincts. They are the centres round which ever-broadening circles of interest can be drawn, provided that the environment is appropriate for this purpose. What is needed for the under-fives is a Children's House or Community Nursery and not a school in the ordinary sense of the term, though there must be trained and sympathetic teachers who will answer questions and guide each individual in his learning. In the right environment the young child will soon learn to feed himself, wash his own hands, clean his teeth, wipe his nose and brush his own hair ; to control the appetite of elimination in accordance with the laws of health and with social convenience ; to dress and undress himself and to put himself to bed. He will learn to recognize the symbols that mark his towel, blanket and other belongings, and will begin to have regard for other people's property. By playing and working in accordance with his inner needs in this controlled environment he will be trained in cleanliness, orderliness, good speech, independence and consideration for others. He will discover the properties of interesting objects, plants, animals, himself and his fellows, and will develop his powers of movement, thought and feeling. This is the positive side of the picture.

It is necessary also to glance at the other side, and



to consider briefly what happens when the dynamic impulses within the infant, instead of being utilized in his training as they would be in a well-run Nursery School, are ignored or repressed.

The refusal of food, irregular and finicky appetite, enuresis, and other failures of control of elimination, unwillingness to go to bed, destructiveness and masturbation are the commonest maladjustments found in childhood. Such difficulties may occur because the training given is irregular and insufficient, the ordinary adult world being unsuitable for the needs of children. For example, an infant brought up in a cramped home in a noisy street by a mother who has more to do than she can possibly accomplish is not likely to have the regular training in feeding and elimination which is required; nor is he likely to be provided with adequate facilities for sleep and exercise. On the other hand, maladjustments may arise because the social conventions of the adult world are made to press too hardly on the growing child. Blame is attached to him in respect of the natural early functioning of an appetite or instinct, and thus there results repression of the impulse which may lead in later life to mental ill-health. The attitude of many adults to the appetites and instincts is still one of regarding them as forms of "original sin" rather than as early patterns of the life-impulse of the individual. In particular, their distorted view of sex, their horror of early masturbation and their refusal to give plain answers to questions arising from natural sex-curiosity in children are responsible for many disasters of development.

What is needed in order to avoid both these errors in training is a controlled environment, suitable for the needs of young children and based on the recognition of the dynamic nature of the appetites and instincts and of their function in development.

An instinct which has considerable strength at a particular time may be transient. Even with an appropriate and many-faceted environment, unless there is also freedom to respond to it when the need arises within, a child may miss the specific forms of activity and the distinctive opportunity for growth which the presence of the instinct makes possible. For example, a two-year-old may have a strong urge to feed, wash or dress himself. The impulse of self-assertion and independence may be temporarily emphasized. When this happens it is a great mistake for the adult to continue to do everything for him. At the best such mistaken kindness is an interference with the child's natural development: at the worst it may lead to temper-tantrums or to other signs of nervous irritability.

One of the greatest contributions which Madame Montessori has made to the theory and practice of Infant education has been due to her realization of this truth, that growth is guided by the appearance and functioning of each transient instinct. She has therefore insisted on the need for the free choice of occupations, even by the youngest pupils, within the limits of a carefully controlled environment. In a Montessori school, if a child wishes to use the buttoning and unbuttoning frame for hours on end no one denies him the satisfaction of his inner urge. It is a funda-

mental principle of the Montessori method that the dynamic impulses within each individual should be utilized for his education.

So it should be in the Nursery School. The controlled environment should not only correspond, in general, to the children's inner needs : but each individual should have freedom to respond according to his particular impulses and stage of development. By our recognizing, utilizing and socializing the appetites and instincts, as they make their appearance, young children can not only be saved from nervous irritability, negativism and self-centredness, but they can be encouraged to grow creatively and harmoniously. In this way the foundations can be laid in infancy for physical, mental and moral health in maturity.

### Chapter 3

#### THE DEVELOPMENT OF THE NURSERY SCHOOL CHILD

*"Watch nature carefully, and follow the paths she traces out for you."*—J. J. ROUSSEAU.

IN order to plan for growth in the pre-school years it is not only necessary to study the basic needs of the individual, which are the starting-points of development, it is equally essential to appreciate the general nature of the maturation process. It is this process that most clearly distinguishes man from the other animals. The basic needs for food, drink, exercise and rest are common to all. The starting-points, the appetites and instincts, are largely the same for man as for the other vertebrates ; but there is a fundamental difference in the variety of controls and modifications of primitive impulses which the human child is quickly able to effect, which separates him from the young of other species. He is distinguished from them by the extent, rapidity and complexity of his development.

It should be noticed at the outset that there are two chief ways in which individuals learn to modify primitive modes of behaviour. They may learn intelligently ; that is, they may profit by their own experiences, and recondition their behaviour to avoid unpleasantness. For example, a small boy of three who ate too much currant cake at a party, and thereby suffered disastrous consequences, afterwards for years refused to touch similar cake. One experience of the consequences was sufficient to deter him from his original mode of satisfying his appetite for food.

Fortunately, there is also another method of learning. A child does not need to learn every modification in the hard school of individual experience. He frequently takes on trust the modifications in behaviour that have been effected in the social group to which he belongs. For example, he need not have the actual experience of choking before he learns not to cram his mouth full of food. He may accept the desirable modification through his imitation of the table manners of his family circle. He learns by means of his sociability as well as by the use of his intelligence: and he is thus provided with a number of short-cuts in the learning process.

There is an accumulation of psychological evidence which suggests that for mental health, especially in the pre-school years, the "social" method of learning should not be allowed to outrun the "intelligent." In the Nursery School there will, of course, be a certain order and routine in regard to the meals, toilet, medical supervision, exercise and rest, which the children will be required to accept without fuss or explanation. Healthy controls of appetites and socially convenient habits will be gradually acquired through this social influence: but rules and conventions, such as, for example, saying "Please" and "Thank you," can easily be over-emphasized at this early stage. Insistence on them, except indirectly by example, may easily lead to tension, strain and possibly unfriendly behaviour.

One of the outstanding differences between the existing Infant, and the Nursery, School is to be found in the different emphasis placed on these two kinds

of learning. The Infant School teacher is expected to teach. She is therefore led to emphasize the "social" method of learning, and endeavours to pass on to the child a certain body of knowledge and certain conventional modes of behaviour which custom has ordained as appropriate. On the other hand, the Nursery School teacher endeavours to "stand-by," in the nautical sense of the term, always willing to give guidance or answer questions when required, but allowing each child under her care to practise intelligent learning and to educate himself with the aid of an appropriate environment.

To provide an appropriate environment so that dynamic methods of response become usual is the chief problem of the Nursery School. It is not a simple problem, considering the age range for which the Nursery School is intended, and obviously can only be solved by a real understanding of, and practical adjustment to, the main lines of the process of development.

For many years the main facts in regard to physical growth during the period have been well known. From about two to five growth, as measured by increases in height, tends to be steady but not so rapid as in the first year of life or in the subsequent years from five to seven. Skeleton development continues regularly, unless there are setbacks due to illness. Neural growth is exceptionally rapid: in particular, the brain develops at such a rate that it is almost complete in weight by about the age of seven. It should be noticed, too, that during this period there is a close relationship between physical and mental

development. Later there may be compensation for physical disability by increased mental activity : but this law of compensation does not seem to operate in the early years. This is one of the chief reasons why it is imperative that adequate food, medical supervision and generally suitable environmental conditions should be provided in the early years. The hazards are many : the gains to mind and body proportionately great.

Recently there have been important, indeed unparalleled, advances in the scientific study of the behaviour of children of Nursery School age. The early descriptive records of the behaviour of infants, such as those of Preyer, Miss Shinn and Sully, have recently been supplemented by the more detailed findings of psychologists, such as Stern and Valentine, who were able to employ experimental methods of enquiry, as well as careful observation, in regard to their own children. The whole field of investigation has been widened to include different kinds of children, not merely the children of University professors, and groups of children, some of them actually in attendance at Nursery Schools. New methods of recording their behaviour by photograph and cinematograph have been used by Watson and Gesell ; and, most important of all, extensions of the Binet method of testing to other aspects of development than intelligence have been successfully employed by Descouedres, Gesell, Bridges and Bühler. By comparing the responses of children to various standardized tests it has been possible to deduce what is the usual or average



Achievement.

The Six-year-old gives the Threes a Ride.

PLATE V.





achievement of children of a particular age-group. Norms of various aspects of development have thus been discovered for children of Nursery School age ; and the characteristic lines of growth during the period can therefore now be deduced, and can be used for planning Nursery and Infant Schools.

Although the various aspects of development are interrelated, it will be convenient to consider them separately under the usual categories in which tests have been administered and for which norms have been found.

### *Motor-sensory Experience*

During the Nursery School years ordinary children acquire, by repetition, many forms of skill, such as running, hopping, balancing, climbing, dancing, digging, lifting and carrying objects of different sizes and weights, using tooth-brushes, spoons, knives and forks, pencils, crayons, paint-brushes and pairs of scissors, manipulating the vocal apparatus to make various language sounds and singing. They gain control of the larger muscles first, and then proceed to more refined movements. Thus the new arrival at a Nursery School, who was just two, freely chose an adventure which involved the exercise of the large musculature, and continued for more than half an hour to repeat the experience of climbing up the steps of the slide, turning and then sliding down. While older children continue to be attracted to this form of exercise, they also enjoy occupations such as drawing and paper-cutting, which involve smaller and more localized movements.

Closely associated with these developments in motor activity there is also an increasing power to use the senses of sight, hearing, touch, smell and taste, and a consequent growth of sense-experience and of knowledge of the self and of the external world. The various senses are not only used separately, but there is increasing co-ordination of their findings; and, with free movement, this leads to judgment of distance and, eventually, to the conquest of space.

In the Nursery, and the reorganized Infant, School there should therefore be many and varied opportunities for the use of the senses and for the manipulation of objects. Whatever criticisms may be levelled against the Montessori apparatus on the grounds of artificiality or over-simplification, there can be no doubt that its invention, following the earlier Froebel gifts, has led to a general recognition of the need for providing a variety of material for the training of the different senses in the early years.

An environment designed for the satisfaction and control of the primitive appetites and instincts, such as has already been described, will naturally provide many opportunities for sense- and motor-training. Even the youngest children in the Nursery School will enjoy trying to wash their own hands, brush and comb their hair, clean their teeth, dress and undress themselves, and eat their dinners with spoons, until they are promoted to forks. The three-year-olds will obtain a real satisfaction in helping in the practical business of the Nursery School by laying the tables in preparation for a meal, arranging the flowers, washing up, sweeping, and mopping up water acci-

dentally spilt. By being encouraged to participate in such purposeful activities they gain valuable experience in the handling of objects, in the co-ordination of movements and the use of the senses, and at the same time they are receiving early training in co-operating with their fellows.

The provision of the right kinds of toys and play-materials also makes possible greater refinements of sense-perception and co-ordinated movement. Building with bricks, digging in sand, paddling and playing with water, sorting shapes or fitting them into corresponding holes, using Montessori or similar "sense" apparatus, pushing, pulling and loading toy carts and wheelbarrows, sliding and riding on scooters, climbing up and jumping down stairs, hanging, balancing and climbing on jungle-gyms are all useful in developing accuracy of perception and movement. Such activities, and the exploration of a garden containing vegetables, trees, flowers, a pond and pets, lead to a rapid expansion of a child's knowledge of the real world.

Pictures are also useful both for training accurate observation and for guidance of the intellectual processes accompanying observation. During the Nursery School period there is a development in regard both to the complexity of the pictures that can be appreciated and also the nature of the actual process of recognition. The younger children are usually satisfied with the perception of the separate items in a group picture, but later there is also appreciation of activities, and, in some cases, of other relations.

Children not only enjoy looking at pictures: they want also to make them. Often in a Nursery School

easels of appropriate size are provided, with large sheets of stiff paper attached to them. Clad in suitable overalls, and armed with paint-pots and large brushes, many children delight in making great splashes of colour on these "canvases." When development has proceeded farther, they are not content with large nebulous tracts of colour, but try to represent objects, or men or animals, which interest them: until, eventually, they grow to find satisfaction also in the more refined movements of drawing with crayon or pencil.

### *Language*

Even before the age of two, there is usually considerable development in regard to the use of speech. According to Stern it is, however, at about this time that the words used begin "to live, bend and move": and at the close of the Nursery School period (at about five) the learning of the spoken language is "mainly finished."

As an aid to exploring his environment, the two-year-old usually becomes interested in words, and he very soon develops a passion for naming objects. Many children in the Nursery School seem to find it necessary to accompany their activities with a running commentary, frequently in rhythmic form. "Go up the steps! Slide down!" they repeat, with appropriate actions. Often they continue, almost without intermission, to communicate their observations and solutions of problems to themselves and to their fellows. By imitation of others and by this kind of rhythmic repetition there is thus a rapid growth of

vocabulary and of language-expression under Nursery School conditions. The trained teacher is constantly needed to answer enquiries: "What's this?" "What's that?", and later, "What for?" and "Why?", or to turn the questions back on the child, who often asks for the sake of the social contact. There are thus natural opportunities for individual help in regard to correct pronunciation, exact nomenclature and clear expression of thought. There are also occasions for the telling of stories, and for language games and songs with small groups of children. Indeed, the acquiring of the spoken language is the chief accomplishment in "social" learning which naturally falls into the Nursery School period.

It is important, however, for mental efficiency that language should develop, in these early years, in close association with direct experience. For example, it is inadvisable that a child should be made to repeat sayings, verses or tables parrot-fashion, without the necessary experience for their interpretation. Precocity in language, which is associated with a lag in interest in the active exploration of the real world and a deficiency in initiative in dealing with play-materials, is undesirable from the standpoint of harmonious growth. Similarly, it is inadvisable that a child should be taught to read before he has gained a considerable knowledge of the real world and a mastery of the spoken language.

There may be a few exceptions, but in the case of the great majority of children the active exploration of an appropriate environment with the acquiring of the spoken language which aids discovery is the

foundational training suitable for the first five years. It is not always realized by the verbalists, who press for the inclusion of reading, what this sense- and motor-training really involves. Not only does a child acquire skills and learn to know colours, forms, sounds and other qualities of objects, but by free activity in an appropriate environment he solves problems and, indeed, practises all the other simple mental processes, such as remembering, imagining, judging and reasoning. Dr. Montessori realized that even the simplified sense-training, which she advocated by the use of her didactic apparatus, provides exercises in attention, comparison and judgment. The appropriate environment of the Nursery School is a challenge to all the budding powers of the young child, and indeed brings into operation all the elementary thought-mechanisms which afterwards function in more complicated forms in adult life.

### *Intellectual Developments*

Not only does a child *perceive* and name the various objects which interest him ; but he also *remembers* what he has perceived, and takes pleasure in recalling past experiences. Sometimes he pretends ; that is, he combines elements derived from his past experiences into new wholes, and *imagines* objects and creatures that have no real existence. Most children of three or four years of age have considerable power of spontaneous imagination. For example, one child of three, after listening to a series of stories concerning animals in the Zoo, described how he also had seen a peculiar animal in the Zoo, called a "kinkak." It had

“a very large red head, a purple body bigger than the room” (in which he was then playing), “and a teeny-weeny green tail.”

In addition, an appropriate environment which presents the child with many and varied problems to be solved provides opportunities for adaptive behaviour and for comparison, judgment and reasoning. Most children of four or five years of age, who are developing normally, constantly ask themselves and other people questions. “Why is the coal-box black?” asked a small boy of four. When he received the reply, “The man who made it probably painted it black so that it would not show the marks of the coal,” he immediately pressed the enquiry one step farther and asked, “Why is the coal black?”

Dr. Susan Isaacs' records of the behaviour of a group of children at the Malting House School, Cambridge, who were allowed a great measure of freedom to experiment in a suitable environment, provide many illustrations of the ability of intelligent children of Nursery School age to puzzle out solutions of problems for themselves, and to use methods of reasoning not fundamentally different from those of the adult, though applied in more limited fields of experience. For example, she records the use of analogy in a conversation between a boy, aged five, who remarked, “Yesterday I drank so much gas water that I nearly blew up to the sky,” and another, aged four, who immediately replied, “Yesterday I ate so many potatoes that I nearly fell down to the ground.”



Madame Montessori has raised serious objections to the practice, usual in Kindergartens, of encouraging young children to use their imaginations in make-believe play. She emphasizes the importance of occupations in which behaviour must be adapted to reality. Indeed, each piece of Montessori apparatus presents the child with a problem in adaptive behaviour. He has to fit different-sized cylinders into corresponding holes, or to arrange insets in their places or to grade colour shades in series. In Dr. Montessori's view phantasy is an escape from reality, which in the interests of intellectual efficiency should be discouraged. Her whole method has therefore a bias towards intellectualism, which it is difficult to square with recent important psychological researches on children's thinking and need for imaginative play.

The researches of Professor Piaget (of Geneva) have a direct bearing on this controversy. By putting a great variety of problem-questions to children, such as :

“ What makes the sun move ? ”

“ With what do you think ? ”

“ Where do dreams come from ? ”

“ Is the table (dog, word, etc.) alive ? ”

and having their answers and the subsequent conversations between them and the investigator recorded verbatim, he was able to collect data illustrative of the thinking of children of various ages. From these records he has drawn the general conclusion that up to seven or eight, the thinking of children tends to be animistic and egocentric, and only afterwards does it become socialized and logical.

Although the balance of evidence does not favour the view that there is a hard-and-fast line before which thinking is egocentric, and after which it becomes socialized, Piaget's researches into children's thinking have undoubtedly forced us to realize that intellectual developments in children are interrelated with personal-social developments. A child who is facing up to reality in a spirit of adventure and who is learning to co-operate with other children is likely also to be developing satisfactorily in adaptive behaviour and in logical thought. Another child, of the same age and of equal intelligence, whose general attitude to life is fearful and negative, will tend to remain more egocentric in his thinking. Personal-social developments need therefore to be considered: and it is here that the Montessori method seems insufficient. All the apparatus provided is for intellectual learning, for exercises in attention, comparison and judgment: none is designed for the development of social relations. The refusal to the young child of the right of imaginative play is a failure to recognize the need for practice in social attitudes, as well as in intellectual processes.

### *Social Developments*

There are many developments in the *feeling* aspect of experience and in *social* behaviour, which seem to be characteristic of the Nursery School period. Gesell recognized the importance of these developments for the understanding of young children, and therefore tried out tests and other methods of diagnosis of personal-social behaviour. Following his general

method, Professor Katherine Bridges has recently made a careful study of the social and emotional developments of a group of Nursery School children in attendance at the McGill University Nursery School, and has been able to construct a tentative social and emotional developmental scale. She has shown that, normally, between the ages of two and five there is a decreasing frequency of intense emotional responses and a marked increase in independence and willingness to co-operate with others. Thus, while the two-year-olds usually tend to cling to their parents and exhibit only a fleeting interest in other children, children of three enjoy playing in pairs and small groups: and by three and a half they are even willing to share with their playmates possessions brought from home. Children of four will take care of those younger than themselves; indeed, they tend in some cases to bother them unduly: but by five they are really considerate of other children.

There are similar developments in the children's relationships with adults. At two they are usually shy with strangers; but later they become friendly with the teachers and helpers in the Nursery School. Under two and a half they usually need help in feeding, dressing and washing, but later they discover that they can do most things for themselves. Frequently they then become assertive of their independence, and may even become markedly disobedient. By four or five there is a general willingness to co-operate with adults and to carry out routine duties in an orderly way.

The broadening of affection and the learning of

co-operation with equals are the foundational developments during infancy on which later moral growth depends. If young children do not learn to love and trust their fellows, but instead develop tendencies to fear, hate and envy in the early years, their later attitude to the whole Universe may be distorted: and even their God may become a jealous God, to be feared rather than loved. They may know Bible stories: through mistaken anxiety on the part of their elders they may even have been taught to recite creeds, parrot-fashion: but if they have not learned to love, they have had a very poor start in the Christian quest for a morality based on love. "For he that loveth not his brother whom he hath seen, how can he love God whom he hath not seen?"

The various aspects of development, which for convenience have been distinguished, are, of course, interrelated in each individual. The recently devised psychological method of recording "developmental profiles" is therefore useful, for it brings into one picture, as it were, these different aspects. Gesell records the results of four kinds of tests—motor-sensory (M), language (L), adaptive behaviour (A) and personal-social behaviour (P)—in one diagram. He is thus able to see at a glance whether a particular child is above or below the normal for his age in each of the chief aspects of development: and whether, in any particular case, language development is relatively more or less advanced than adaptive behaviour, and adaptive behaviour more or less advanced than social behaviour.

Dr. Charlotte Bühler's "Viennese" tests are in six

categories, namely, sense-reception, bodily movements, social behaviour, learning, manipulation of materials, and mental productivity: and the developmental profiles recorded by her are correspondingly intricate. In addition, she makes use of the conception of a Developmental Age (D.A.), which is calculated from the total score in all six kinds of tests, and which reveals whether the individual is above, below or equal to the average for his chronological age.

The question of the right age of admission to the Nursery School or Nursery Class is at present being hotly debated, some supporters claiming that admission at two is essential, and other opponents affirming that three is young enough. The psychological view suggests that the right age is a developmental, and not a chronological, age. This will vary from individual to individual, according both to inner growth processes and outward home circumstances. For example, if a child feels the need for independence and the mother is inclined to be unduly protective, or if there is a deep urge for child-companionship which the home cannot satisfy, or if a child is spoiling for more problems to solve than the home supplies, attendance at a Nursery School may be desirable at an early chronological age, in order that growth may not be impeded. On this count, it should certainly be possible where necessary to admit at the age of two; though in many cases later admission may be appropriate. In this respect the Nursery Class attached to the Infant School is at a disadvantage as compared with the Nursery School, for by existing regulations it cannot admit before three under any circumstances. This is another case like

that of transference from Infant to Junior School or from Primary to Secondary Education, where flexibility is needed, and where developmental, and not chronological, age should be the chief determining factor in educational planning and in fitting the school to the child.

## Chapter 4

### THE SIGNIFICANCE OF PLAY

*"Play is the spontaneous expression, according to the necessity of its own nature, of the child's inner being."*—FROEBEL.

PLAY is usually defined as the spontaneous expression of individuality without ulterior motive. It is for its own sake, for the joy in the process itself. Work, on the other hand, is performed for the sake of some future good, conceived of by the individual. In itself, it is a limitation of the individual's freedom. Of course, there is no absolute line of demarcation between work and play. The work of the artist may be such a free expression of his personality that it may have all the felt qualities of play. Conversely, sport which begins as play may become hard labour, the training for improvement and the desire to establish records or to win prizes making it like work. In the view of the writer of the Book of Genesis, there was no work in the Garden of Eden before the fall of man. Mr. Bernard Shaw also conceives of the ideal society as a Commonwealth "in which work is play and play is life : three in one and one in three." Under actual present-day conditions this merging has not been effected : and in the experience of the majority of adults there is a very real, though not an absolute, distinction between work and play.

There are certain obvious facts and generalizations concerning the play of man and of other animals which it is necessary to review before proceeding to consider recent psychological researches into the nature and function of children's play. In the first place, it is

clear that it is those animals that are most immature at birth that spend the most time in play. The kitten and the puppy are cheerfully playful in their youth; while the chicken, which is relatively self-sufficient soon after it emerges from the egg, is somewhat staid and goes about its business with almost Puritan-like solemnity.

At birth the human infant is startlingly immature. Its movements are unco-ordinated and it has not yet the power to see, hear or use its other senses. Apart from feeding and certain other vegetative functions, it appears to be only capable of a few random movements like stretching, a few reflexes like sucking and the art (if art it can be called) of crying. Most of its time in the early days is spent in sleep. Associated with this extreme helplessness at birth there appears to be a marked tendency to play in the early years, as though play were some kind of device for developing crude powers and making good the deficiencies of immaturity.

Further, the higher the animal is in the scale of intelligence, the more it seems to play. The lower animals have relatively fixed modes of behaviour, whereas the higher animals modify their first reactions by intelligent learning, and for this they seem to need to play. Each species has its distinctive forms of play, related to the kind of life which is going to be lived in maturity. For example, the kitten plays with the ball of wool in much the same way as the cat proceeds to catch a mouse. It is also not without significance that there is a steady diminution of play as the individual matures. Such facts seem to indicate



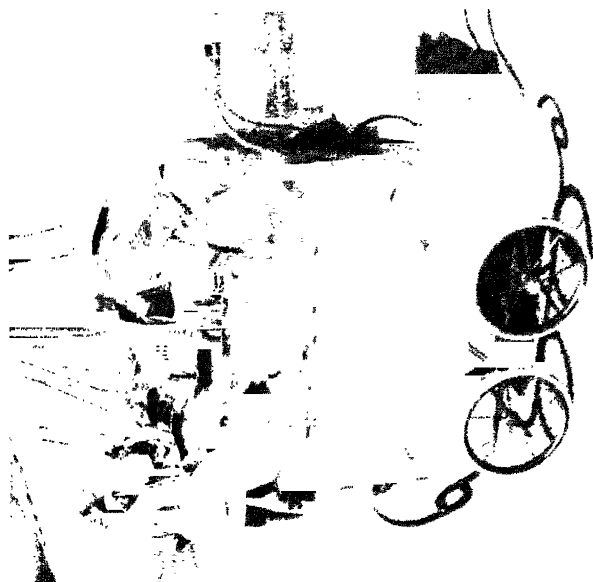
that at least there is a certain element of truth in Karl Groos's view that play is a preliminary practice or preparation for future activities.

In man play appears in an almost infinite variety of forms, and continues, though with diminution, to the end of life. It is doubtful whether the Practice Theory, or indeed any one of the other theories of play which have historic interest, such as the Recreation, Surplus Energy or Recapitulation Theory, is sufficient to explain all the varieties that can be observed in human beings. There is play, for example, in maturity, which is almost purely recreative. In some games of childhood the individual may appear to be recapitulating past racial history; in others to be unconsciously engaged in preliminary practice for the serious activities of the future. In both he is trying out modifications in his primitive modes of behaviour, sublimating his instincts and learning to adjust himself to the living present, *without repression of his freedom and individuality*.

There is so much that a young child has to learn, and there are so many modifications of primitive modes of behaviour that he has to acquire in the process of adjusting himself to a highly complex civilization such as ours, that the dangers of repression and of failure in self-confidence can hardly be exaggerated. It is through play that the normal child escapes these dangers, trying out modifications according to choice, joyfully expressing his own desires, and thereby increasing his sense of security and well-being, and at the same time adjusting himself to the civilized society of to-day.

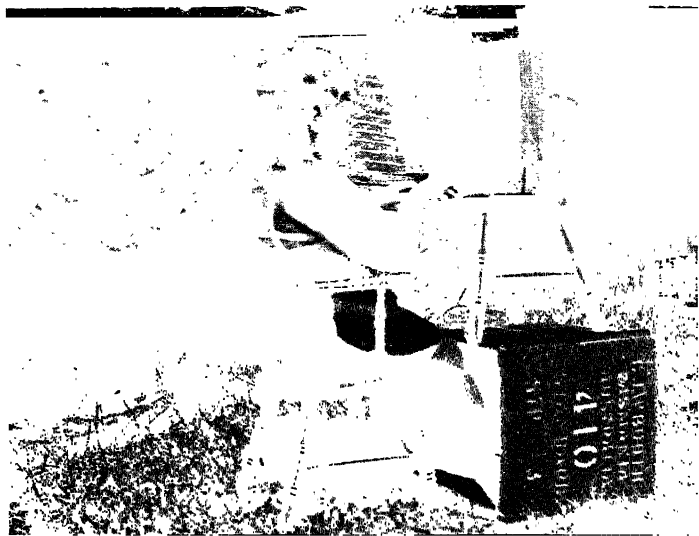


The Jungle Gym.



The Pram.

PLATE VI.



Solitary Imaginative Play.

Flour Play.

PLATE VII.

Early in the last century Froebel realized that play in childhood is not merely recreative, but "is a serious occupation and has deep significance." In his view, "it begets joy, freedom, contentment, repose within and without, peace with the world." Modern psychological researches into child-development have reinforced the belief that play is the supreme psychological need of the young child. Consequently it is the one method of learning in the early years which is most likely to be conducive to the physical and mental health of the individual, in the process of his adjustment to the civilized society of to-day.

Play by its very nature is spontaneous. It involves a voluntary decision to play, a choice of the particular thing to be used in play and a choice as to what is done with the plaything chosen. In order that the necessary toys and play-materials may be provided to meet the varied needs of different children at different stages of development and thus to enable each to have a real measure of choice, the Nursery and Infant School teacher will find it useful to consider the findings of psychologists who have made special studies of the play of young children.

For example, the results of Dr. Margaret Lowenfeld's researches on children's play, conducted in the Institute of Child Psychology, which have recently been published under the title *Play in Childhood* are most illuminating, though it must be borne in mind that most of her subjects were maladjusted children, who attended at the Institute because of difficulties of development. There was provided at the Institute a great variety of toys and play-materials, suitable for a

wide range of ages and including phantasy material, such as water, sand and materials for free drawing and painting; construction material, like Meccano and paper-cutting and pasting apparatus; miniature adult material, such as dolls and dolls' houses; cutting, piercing and other instruments of destruction; and musical instruments of various kinds. The children were allowed to choose their occupations, and were carefully observed by adults, who interfered as little as was feasible, and made as complete a record as was possible of each child's choices and methods of using the play-materials chosen.

The chief conclusion drawn by Dr. Lowenfeld that relates to young children of Nursery School age is that the peaks of interest in different kinds of play come in a certain order, though neurotic children may adopt any form at any age. First comes play, such as bouncing a ball or pulling a wagon, which is largely bodily activity. Then comes play as the repetition and realization of experience already gained. Some children enjoy buttoning and unbuttoning, filling and emptying vessels, turning keys in locks to open doors or fitting differently shaped or sized solids into cavities. Then comes play as the expression of phantasy, and in this there is an element of make-believe; and almost any object may serve as a symbol. This kind of play is very common between the ages of two and four. Then, at about five, comes play as the realization of environment. For example, many children at this stage play at keeping shop or house, going to church, baptisms, weddings and even funerals. Mixed with this is play as preparation for life. After

about four, a normal child indulges in all these types of play. Social play, in which companions take a part, also tends to become more prominent as development proceeds.

If Dr. Lowenfeld's findings concerning the order of the peaks of interest in the various forms of play be accepted, considerable light is thrown on the question of the place of the Montessori apparatus in the Nursery School. It has already been pointed out that each piece of apparatus is meant to be an exercise in adaptive behaviour ; and its use as a symbol for imaginative constructions is definitely not allowed by the strict followers of Montessori. Some practical teachers have noticed that highly intelligent children seem to tire quickly of the apparatus, whereas dull and backward children continue to find it attractive over long periods of time. This would naturally prove to be the case if the Montessori apparatus is play-material of a particular kind, especially suitable to the second period distinguished by Dr. Lowenfeld, when play tends to be repetition and realization of experience already gained. As Dr. Montessori intended, its use gives little scope for imagination ; and it will therefore tend to be superseded when the child's interest passes to phantasy play.

Madame Montessori objects, on principle, to phantasy-play, and is inclined to regard it as a peculiarity of maladjusted children. Perhaps, at first sight, her view receives some support from the psycho-analytic interpretation of such play as expressing in symbolic form the individual's unfulfilled desires. It is true that imaginative play often seems to be com-

pensatory and to supply an outlet for emotion when contact with reality becomes difficult. It cannot, however, be assumed that it is only indulged in by maladjusted children. Many observers, from Froebel to Stern, have found it to be a characteristic activity of normally developing children, especially during the Infant School period.

Dr. Ruth Griffiths' recent investigation of the imagination of London (and Brisbane) Infant School children clearly showed that phantasy played a large part in their emotional and intellectual development. The responses of a number of five-year-old children in story-telling, free drawing and the interpretation of ink-blots were collected under experimental conditions over a considerable period of time. They indicate that the imaginative constructions of particular children bear a close relationship to their unsolved problems ; and, in general, that phantasy is commonly used by ordinary children in their efforts to adjust themselves to their environment.

The preference shown by young children for simple toys and play-materials is itself evidence of the urge towards imaginative constructions. With sand, or pine cones or even with a walking-stick, there are so many possible alternative games, whereas with the intricate toy telephone nothing can be done except telephone. It is usually the fathers, who have to work the ready-made complicated toys, and not the young children to whom they are given, who really enjoy them. The children are content with such simple things as boxes, buttons or pine cones. It is recorded, for example, that as a young child Carlyle played with

great delight with a bunch of keys. Hetzer investigated what kinds of objects some 150 children chose to use in play and found very great variety of simple and, in some cases, inchoate material, such as boxes (12), tins (6), stones (15), pots (13), sticks (7), water (6), sand (5) and spoons (5). Apparently what is needed is not perfection, but scope for variety and imaginative constructions.

A healthy child's play, however, is never all phantasy. In this respect, it differs, as Robert Louis Stevenson realized, from an adult's day-dreaming. "We grown-up people" he said in *Child's Play*, "can tell ourselves a story, give and take strokes until the bucklers ring, ride far and fast, marry, fall and die; all the while sitting quietly by the fire or lying prone in bed. This is exactly what a child cannot do, or does not do, at least, when he can find anything else. He works all with toy figures and stage properties. When his story comes to the fighting, he must rise, get something by way of a sword and have a set-to with a piece of furniture, until he is out of breath. When he comes to ride with the king's pardon, he must bestride a chair, which he will so hurry and belabour and on which he will so furiously demean himself, that the messenger will arrive, if not bloody with spurring, at least fiery red with haste. If his romance involves an accident upon a cliff, he must clamber in person about the chest of drawers and fall bodily upon the carpet, before his imagination is satisfied. Lead soldiers, dolls, all toys, in short, are in the same category and answer the same end."

The child's activity and use of play-materials



suggest that even in imaginative play there is some measure of adjustment to reality. For example, the child who momentarily indulged in the phantasy of the "kinkak," the strange animal which had "a very large red head, a purple body bigger than the room and a teeny-weeny green tail," at a slightly later date played a somewhat complicated animal game. All the toy animals which he possessed, including those belonging to the Noah's Ark, were to go to Chapel, under the nursery table. There were great preparations for this event: the giraffe had a feather boa tied round her neck: pennies and halfpennies were made, in order that each of the animals might have something to give in the collection. Even with the aid of an adult this took some time, for each coin had to be pencilled on paper, superimposed on a real coin, and then cut out. When all due preparations had been made, the animals were marshalled into their places under the table. Then the Service began and soon the knotty question of the sermon arose. Who was to preach it? The child disappeared under the table, then reappeared and announced that the animals would prefer to have a sermon preached by one of themselves.

This form of play, which is typical of the three to four stage, might be interpreted as the expression of a wish for power to order the church-going of others, instead of submitting to be taken to Chapel; or as the embodiment of an aversion from enduring a sermon by an adult or outsider. Whatever interpretation in terms of wish-fulfilment might have proved justified on investigation, one point remains unaltered, namely, that in addition there was also contact with reality, in

the dressing and use of the toy animals and in the making of the pennies. In contrast with the phantasy of the "kinkak," this play has a certain level of reality, though it has also something of the fluidity of unreality.

The attraction and, indeed, the value of play in child development turns on this, its double nature. On the one hand, it gives freedom and provides opportunity for the expression of wishes or primitive impulses which are not in harmony with the conventions of adult society. On the other, it gives the individual some measure of contact with the real world and thus provides opportunity for adjustment to its nature.

It is important for a child's mental health that the dynamic impulses within him should not be repressed. It is equally important for the growing-up process that they should be modified and socialized. Thus, suppose, for example, that a child is strongly moved by the instinct of pugnacity. It is obviously undesirable both for him and his companions that he should bully and belabour them. It is equally undesirable for this hostile condition to be bottled up during infancy, perhaps to find outlet in dangerous aggression during adult life. A hammering game, played with or without phantasy, may help the individual to canalize and control the impulse. A hammer and a block of wood pierced with holes through which rods can be hammered is often, under these circumstances, a source of delight to a young child. He is perhaps not satisfied with his first attempt, but again and again turns the block over and with lusty blows hammers the rods through in the reverse

direction. In this play the impulse to strike is being utilized in adaptive behaviour, which gives practice in the co-ordination of eye and hand, and which, far from being anti-social, may result in an improved technique in the useful art of hammering. There is relief from emotional tension, and contact with reality.

On many occasions a young child must feel small and helpless in comparison with adults and with the strange world which confronts him. It is of the utmost importance for his future efficiency and mental health that he should not lose confidence in himself, and thus develop a negative attitude to life and its problems. Play is his chief safeguard against this kind of disaster, for it gives him, at one and the same time, both security and adventure. It enables him to solve piecemeal problems too difficult for direct solution. For example, a child who is afraid of horses may choose to play with a wooden horse or to play at being horses. By so doing he may gradually be able to face his particular fear. Play of this kind has a valuable cathartic function, enabling a child to get relief from emotional tension, to maintain a positive attitude towards his problem and to take at least a step towards better adjustment to his environment.

It has already been pointed out that there is a certain level of reality even in phantasy-play. As the individual develops, there tends to be a raising of this level. This shows itself in increasing tendencies to play with other children, where there must be self-imposed limitation of wish-fulfilments and of the fluidity of unreality. Then, as Dr. Charlotte Bühler has shown, there are characteristic changes in the use

of materials. The child proceeds from unspecific to specific manipulations of materials : he learns to set himself a goal and plan his activities with materials carefully, so that the constructive aspect gradually becomes more pronounced. By about five or six a normal child should have acquired ability to stick to an activity until the goal is reached ; that is, he should have attained the beginnings of a work-attitude in and through his play-development. This, indeed, is one of the objectives of Nursery School education. But there must be no cutting-out or artificial shortening of the period of development through play, on which physical health, mental efficiency and growth of character depend.

The cathartic function of free play has even now not been sufficiently realized in many Infants' Schools. The experiment has recently been tried in a London Infants' School,<sup>1</sup> not only of having an all-play morning session for the babies' class, but also of having a morning session for the other children consisting of (*a*) Free play, (*b*) Ventilation and (*c*) Work connected with the three R's. In the early part of the day the children are free to choose their own play-materials and methods of play. Some of the younger children delight in playing with dolls, prams, trains, dough, rolling pin and pastry board ; at washing dolls' clothes ; loading toy wheelbarrows or building with bricks. Others are found dressing up for weddings, Punch and Judy shows and plays ; or making posters announcing future performances. Some combine in groups to make large constructions,

<sup>1</sup> Sigdon Road L.C.C. Infants' School.

such as boats and aeroplanes, out of wooden boxes and other waste materials. Afterwards, having had, as it were, these physical and mental health exercises, they settle down to what is usually regarded as the business of the school with serenity and concentration. The ventilation interval presents a striking contrast to the recreation interval of other schools: for these children, who have not been repressed and frustrated, neither go out as though they were escaping from captivity nor do they need bell, command or line-formation to make them return to their classrooms.

If free play is to be allowed and encouraged, there will need to be provided a sufficiency and a great variety of toys and play-materials, so that each child can find satisfaction for his individual needs. It ought not to be difficult or expensive to provide the simple toys and the kind of play-material, much of which may have been discarded from home, shop or industry, which will be joyfully utilized by children of Nursery School age. It is important that, from the beginning, it should be made clear that the toys and play-materials provided belong to everyone, and that while a user has a special claim on a toy so long as it is actively in use, on many occasions taking turns must be the recognized order of play.

Whatever shortage of play-materials an Infant School teacher may have to contend with, there always remains the unlimited possibility of utilizing movement, language and music as the vehicle of play. The finger plays of the past, such as "This little pig went to market," have recently had many and better successors. For example, Ann Driver has shown the possibilities

of rhythmic movement as a suitable medium for the expression of phantasy in early childhood. Not only do infants enjoy representing in bodily movement trains, birds, aeroplanes, waves of the sea and trees blown by the wind, but this kind of play has great possibilities of development in regard to social co-operation. Similarly, action songs and games, especially where there is full rhythmic combination of vocal and muscle activities and of social responses, are of the greatest value in helping young children to express and control their dynamic impulses and to modify their demands upon the world in relation to their fellows.

Play is, then, the supreme psychological need of the young child. The satisfaction of this need is as necessary for mental health as is the satisfaction of the appetite of hunger for physical health. Wherever the home, rich or poor, fails to provide the conditions for the full satisfaction and the natural development of this dynamic impulse to play, there can be no doubt that it needs to be supplemented by the Nursery School.

“What man is there of you, whom if his son ask bread, will he give him a stone? Or if he ask a fish, will he give him a serpent?” Or if he ask to play, will he give him the three R’s?

## Chapter 5

### THE HOME AND THE NURSERY SCHOOL

*"Whoever has the welfare of the rising generation at heart, cannot do better than consider as his highest object the education of Mothers."*—PESTALOZZI.

THE criticism has sometimes been levelled against the Nursery School that it relieves parents of their rightful responsibilities towards their own children. This would be a very serious objection, if it were well founded; but careful consideration shows that it is based on ignorance or misunderstanding of the true nature of the Nursery School. It is not generally known by critics who make the objection, that parents who can afford it are charged the cost of the meals provided in the "free" Nursery School, though on account of big-scale catering this usually only amounts to about one and sixpence or one and ninepence per week per child. It is also not fully realized that one of the basic principles underlying the Nursery School is that, in all that is done, there should be the closest co-operation with the parents of the children in attendance.

The Nursery School is not a substitute for, but is a supplement to, the home. Under present-day industrial conditions, with widespread poverty and unemployment, it is indeed a necessary supplement, for without it many children would not have the food, medical supervision, fresh air, sunlight and rest which they need for growth; nor the space, equipment and play-materials for free activity, which they also require at this stage of their development.

There is an equal need for this supplement to the home on psychological grounds. Many a mother becomes careless and slack, or irritable and harsh, through being continually confronted by a task incapable of achievement. One has only to observe the treatment meted out by the over-wrought mother to her child on a railway journey, for example, to realize the danger inherent in this situation. The child is allowed to eat incessantly, to finger other people's belongings and generally to make himself a nuisance in the compartment. Or he is reproved for his natural impulses, blamed for his dynamic curiosity and threatened for his ceaseless activities. Eventually he is shaken, or slapped or terrorized. When one hears such threats as, "I'll give you to the policeman!" or "I'll throw you out through the window if you don't keep quiet!", one's first thought is that such mothers do not deserve to have children. But, on second thoughts, one realizes that it is not the mothers who are to blame, but the system which provides no relief for them in a twelve-, fifteen- or even eighteen-hour working day. Their failure is largely due to nervous irritability, which comes from inadequate rest and change, and from being continually confronted with a hopeless task, for the fulfilment of which they have not even received the requisite minimum of training.

Contact with the specially trained superintendent of a Nursery School might help such a mother to develop more understanding of her child's nature and needs. The attendance of the child at the Nursery School for certain hours during the day would also



give her some respite from her labours, and might enable her to maintain that sympathy and serenity of mind which is so essential for the development of a healthy emotional relationship between mother and child.

A change of environment is also likely to be salutary to the child's emotional state. Adults who have been confined to small spaces for long periods of time, without the possibility of change of companionship, know how nerve-racking such an experience may be. One of the members of the Shackleton Expedition to the South Pole, who was compelled during a blizzard to live with a number of companions under an upturned boat, relates that to him this was a far more trying experience than all the other hardships that had to be endured. The very fact that it was impossible to escape from his companions made their mannerisms sources of irritation to him, and led to a state of exasperation that was certainly irrational. There is no reason to suppose that it is any easier for a young child than for an adult to escape emotional tension when he is compelled to remain with the same person all day and possibly all night. A mood of wilfulness that under other circumstances would have disappeared with change of scene and companionship becomes accentuated: and both the mother's difficulties and the child's chances of maladjustment are increased.

If the home is cramped and confined, it may not be possible to give the children a room, a garden or even a space in which to play freely and in safety. Under these conditions, innumerable actions not in themselves

undesirable will have to be prohibited and the young child may, therefore, be barricaded on all sides by "Don'ts." It is imperative for physical and mental health that, at least for a part of the day, every child should be in an environment where its dynamic impulses need not be repressed and where its responses can be positive without danger to its life. Homes which cannot provide adequate opportunities for young children to have adventures with security, therefore, need to be supplemented by a Nursery School.

At a certain stage in the social development of every child there is an obvious need for psychological weaning from the mother. Many children, especially *only* children, who are straining for independence and needing the companionship of equals, have their emotional growth impeded by too much mother-protection. In extreme cases this may lead to temper-tantrums or to parent-fixation. In all cases it is a hindrance to social growth, which can most easily be avoided by attendance for certain hours during the day at a well-run Nursery School or Kindergarten.

Even when parents are doing all in their power for their children, home-care, under many conditions, needs to be supplemented by the Nursery School. But at the same time it must be acknowledged that the home is necessarily the premier training-ground of the emotions, either for good or evil. The first lessons in love or hate are learned there : and the early relationships established between a child and his parents largely determine his subsequent emotional development.

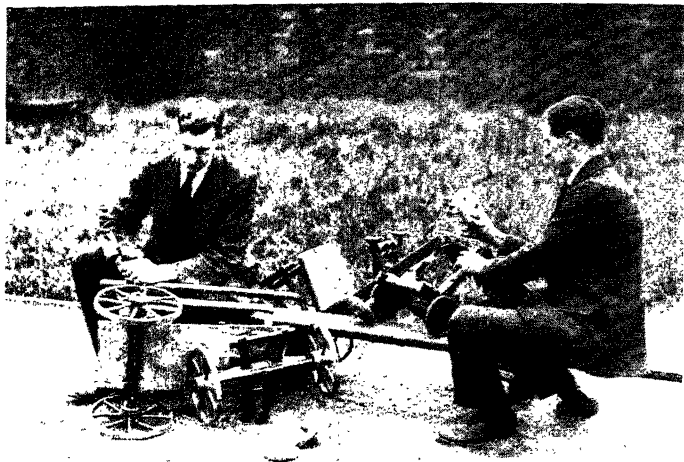
Recent psychological researches, such as those of Freud, Adler and Flügel, have provided additional evidence in support of the traditional view that the early relationships established between a child and his parents are critical for his character-development. In extreme cases over-solicitude on the part of the mother may lead to neurotic self-centredness or parent-fixation on the part of the child. In less exaggerated cases, failure to develop independence of the mother may result in a lack of effectiveness or an inability to co-operate with equals, in adult life. There is also the opposite kind of danger. A child brought up in a loveless atmosphere tends to develop suspicions of others. Parent-hatred in childhood is the root from which there may spring in later life a rebellious attitude to authority, which may even affect the individual's philosophy of life, his conception of, and relation to, God and the Universe.

The relationship of the parents to each other is also an important factor which influences for good or evil the emotional development of children. Dr. William Healy found that there were proportionately more children from wrecked homes in a group of *delinquent* boys and girls, whose histories he was investigating, than were to be found in an unselected group of the same size. Out of 1,000 delinquents, 498 came from homes where one or both parents were missing through death, desertion or separation : while 311 came from homes where one or both parents were frequently, or occasionally, intoxicated. The danger of serious maladjustment to society is undoubtedly much greater for children belonging to homes where,



Arriving at the Nurseiy School with Mother.

PLATE VIII.



Fathers mending Toys.  
Riding on a Father's Horse.

PLATE IX.

for one cause or another, parents fail to pull together, than it is for children who are members of happy and wholesome family circles.

This is true of homes which may appear superficially to be unobjectionable. Where there is serious disagreement and friction between father and mother, the child may side with one against the other; and may develop fear, jealousy and hate of the one parent, with perhaps an exaggerated affection for the other. This kind of triangular family relationship may lead to definite neuroses, such as parent-fixation or homosexuality, and certainly decreases the child's chances of healthy emotional development.

Since the family circle is so fundamentally important in the early emotional development of the child, it is obvious that the Nursery School, considered apart from the homes that it supplements, would be a very incomplete environment for the training, and especially for the social education, of infants. On this account it cannot fulfil its real function unless there is the closest co-operation between its highly trained staff and the parents of the children in attendance.

The need for co-operation with the parents has been clearly realized by Nursery School teachers, who have given a valuable lead to the whole teaching profession by the way in which they have seized their unprecedented opportunities in this direction. The very fact that the children are so young inevitably means that they have to be brought to school every morning and fetched again in the afternoon by father, mother, elder brother, sister or other member of the family. Contacts between the staff of the Nursery School and the

parents of the children in attendance are therefore easy. Superintendents are naturally not content with these hurried meetings, but usually encourage mothers, and fathers too, to visit the Nursery Schools frequently and to spend some time in the garden and play-rooms to see their children at play.

In the French *Ecoles Maternelles* there are definite requirements made of the mothers. Each child must be clean and must be provided with a clean handkerchief, overall and towel (properly marked). The parents must pay for the cost of meals, unless the child's name is on the "free" list; and in some cases they are also expected to provide dessert. It is not unusual for the mothers to be encouraged to come to the school on half-holidays and Saturdays to use the facilities provided for bathing their own children.

One of the most striking features of the Nursery School has been the willingness of the parents, as well as of the teachers, to co-operate in the interests of the children. Parents' Clubs have been promoted, and regular meetings for providing additional amenities for the Nursery School, for the discussion of problems of child-development or for social purposes are usually held. For example, in one Nursery School in a slum in Manchester the mothers had been holding a weekly meeting to cut out and make the overalls which they were asked to provide for their children's use in the Nursery School. Some of the older boys, who were accustomed to bring their small brothers and sisters to the Nursery School, then asked to be allowed the use of a room in the evenings for a boys' club. Before long the superintendent received a deputation of

fathers, who said, "You are doing something for the mothers and for the boys; where do we come in?" As a result there was also arranged a regular meeting of fathers, and toys were made for the children and other help given by them as it was needed.

Some voluntary Nursery Schools have actually been built by the labour of unemployed fathers. In others, mothers have taken turns in the washing of the children's overalls and the cleaning of the school premises; and fathers have dug and laid out the gardens. Even Nursery Schools financed by Local Education Authorities have received help and gifts from parents for their improvement. Thus, when one school which the Bradford Local Education Authority was reorganizing as a Nursery-Infant School was left with a central hall the floor of which was inclined to splinter when used for free play, the parents combined to buy and lay linoleum on the floor. No doubt afterwards they felt a deeper interest in the school, which was in a measure theirs, than they ever would have if they had not thus co-operated. The voluntary services of parents to Nursery Schools have provided proof, if any were needed, of the deep urge in the majority to fulfil their parental responsibilities—a drive towards human betterment which so far has remained largely untutored.

It is indeed surprising that, notwithstanding its marvellous achievements in other directions, the adult educational movement in this country should have so far taken little account of this need for education for parenthood. The courses of study arranged by Local Education Authorities for young people and adults



have been largely technical and vocational in character; and the classes held under the auspices of the Universities and of such voluntary bodies as the Workers' Educational Association have been mainly directed to meet the needs of adults desiring personal culture or further education for citizenship. The natural interest of parents in their children has so far been relatively little utilized in adult education, except possibly in Women's Institutes. This failure to take account of one of the most dynamic of all human impulses is the most obvious gap in the existing provision for adult education. The Nursery School has a distinctive part to play in bridging this gap. Far from relieving parents of their natural responsibilities towards their children, it should be a means of helping them to realize the full magnitude of those responsibilities.

There are very few fathers or mothers who are intentionally cruel, or even indifferent, to their children. But there are many who have little relevant knowledge of child-development, and correspondingly little insight into the interest, needs and difficulties of their own children. There are some who are not even wise enough to obey the first rule for successful child-management: "Respect the child. Be not too much his parent." There is probably some justification for J. B. Watson's arresting statement that the oldest profession of the race (parenthood) is to-day facing failure. This, at least, is true, that with the growth of science and of education the technique of the parental vocation has not developed so rapidly as might have been expected. The methods used for the upbringing

of children are still largely those of muddling through, on the general principle that what was good enough for us is good enough also for the next generation. Notwithstanding the great advances recently made in the sciences of Embryology, Physiology, Anatomy and Child Psychology, there has so far been no corresponding development in preparatory training for parenthood, or in improving the haphazard methods of entering the profession. This *laissez-faire* policy seems to be due partly to a widely current misunderstanding of the nature of the parental instinct, and partly to a failure to realize the full significance of the function of parents in the process of human evolution.

The view that education for parenthood is unnecessary often arises from the assumption that the parental instinct is in itself a sufficient guide in the difficult art of child nurture. No psychologist would deny the importance of the parental instinct ; but in human beings, whatever may be true of solitary wasps, it is always allied with intelligence and sociability. Its operations may therefore be modified by the individual's power to learn from his own experience and to profit by the discoveries of his fellows. The parental instinct is, no doubt, powerful ; but, unilluminated by individual intelligence and social wisdom, it is blind. Unaided it cannot solve intricate problems of the nutrition and management of children ; but it has dynamic force sufficient to enable men and women to seek knowledge of child-nature and child-development, to learn to observe their children carefully and with insight, and thus to solve the problems of their

upbringing. The parental instinct is, then, the supreme drive in the process of training for parenthood. It provides the motive power, but is not a substitute for that training.

The failure of this generation to utilize the new discoveries of the biological and psychological sciences in order to effect improvements in the nurture and education of children is also partly due to a limitation of outlook concerning both the functions of parenthood and the possibilities of education. It is assumed in many quarters that the parents' responsibilities begin and end with the happiness and growth of their own children. It is not fully realized that because the love of parent for child is of the very essence of life, being a part of the creative movement which transmits life, it is also the earnest of further human evolution. The more insight parents have into the nature and growth of their children, the more effectively will they be able to prepare for the advent of reforms in existing society. For example, the abolition of war—the most cruel and irrational custom found to-day among civilized or uncivilized societies—will only become possible as man's knowledge of the psychological origins of war and his insight into the nature of individual development increase, and can be applied to the solution of the problems of educating for peace. Although there is need for much further research, this at least is already clear—that education for peace, involving as it does the growth of a morality based on persuasion rather than force, must begin early and must go deep. It necessarily implies the intelligent and thoughtful co-operation of parents, who, by maintaining an atmo-

sphere of sympathy, serenity and love in the home, and avoiding a human environment of anxiety, frustration and hate, can do much to encourage the growth of this higher morality and to prepare for this great advance in human evolution.

It is the parents' example, their adoption of the Christian ethic in the management of the home and in the treatment of their fellows, which will be the most powerful influence in the moral and religious education of their children.

There can be no question of compulsion in adult education. Education for parenthood, like other forms of adult education, must be on a voluntary basis: but there should be means of focusing the demands of parents for further education so that appropriate facilities may be provided by the State. Friendly contacts with the trained superintendent of a Nursery School will no doubt encourage some to begin to study their own children and to try out in the home more enlightened methods of discipline. Informal parents' meetings in the Nursery, or reorganized Infant, School, consisting of simple talks or lantern lectures on nutrition, health and children's ways, or of discussions between the parents and teachers on the problems which they encounter in the management of children, would be the natural means of focusing the demands of parents for expert help in continuing their studies. Some kind of affiliation of these parents' clubs with existing branches of adult educational organizations might very easily lead to a great development of discussion groups and classes in Child Hygiene and Child Psychology, and to a real

improvement in the standard of child nurture in the locality.

The Nursery, or reorganized Infant, School would be the natural observation-centre, or laboratory, for the study of young children. Scientific records of the growth and behaviour of the children in attendance, including their choice and methods of play, could be carefully kept, and would be of the greatest value to the staff of the School in aiding them to adjust their guidance to the needs of each individual. In one American Nursery School three kinds of records were kept, namely, a daily chart, giving particulars of food responses, length of sleep, times of urination and social responses; a weekly summary, indicating the main activities of the child with other children, adults and material, and in language and music; and an occasional full-day record, in which details of the child's responses to the Nursery School environment throughout one whole day were entered. Copies of the daily charts were sent regularly to parents and proved of real interest to them.

There can be little doubt that such records concerning their own children would be illuminating to many parents, and might even inspire some to make their own careful observations of their children. The course in Child Hygiene and Child Psychology, associated with a Nursery School, can therefore start from first-hand experience, and can thus become living and practical, and not merely bookish and theoretical.

The Nursery School teacher should be an expert observer of young children, as well as a skilled practitioner in the art of child nurture. She should be

specially trained to interpret the varied responses of children to their environment, in order to be able to give each individual the help and encouragement which he or she really needs. She should be able to keep records of the behaviour of children, and to administer tests of development, if required. If all these functions are to be fulfilled, the staffing of the Nursery, or of the reorganized Infant, School will need to be both generous and appropriate.

In a large Nursery School, consisting of several play-rooms, there should be a specially trained superintendent, if possible resident in the school; there should also be a medical officer and a nurse attached to the school and visiting it regularly. In addition, for each group of 30 or, at most, 35 children there should be one fully trained teacher with several helpers. There should also be adequate domestic help. At first sight it may appear that this suggested provision is extravagant; but when it is realized that the Nursery, or the reorganized Infant, School is the foundation of all the later health and educational services, expenditure on it will be seen to be either a justifiable insurance against subsequent loss, or even an investment yielding the highest compound interest.

With a highly trained and sympathetic staff the Nursery, or reorganized Infant, School could undoubtedly succeed in raising the standard of child-nurture and of home life in its immediate locality: and it might also be able to add something to existing knowledge of child-hygiene and child-development. Thus, it would fulfil its threefold function: as a suitable

environment for the harmonious growth of individuals during the critical period of infancy, as a centre for the education of parents and as a research laboratory for the study of the laws of health and development of young children.

*PART II*

PROCEDURE IN THE NURSERY SCHOOL

BY IRENE G. EARL





## *Chapter 6*

### THE NURSERY SCHOOL IN PRACTICE

THE daily programme in Community Nurseries or Nursery Schools must, of course, vary to some extent, to suit the particular homes and circumstances from which the children come. In some cases it may be found necessary to care for the children in school from early morning until late afternoon, while in others a shorter school day may be all that is needed to supplement the care and training given in the home.

A very general hour for opening is between 8 a.m. and 9 a.m., and if we were to visit a Nursery School at this time we should see mothers, fathers, elder brothers or sisters bringing the little ones to safety and serenity, which conditions are essential for their well-being and development.

Many two-year-olds are wheeled in push-chairs or perambulators, and a parking place has therefore to be provided for these conveyances; but since it is undesirable for little children to travel long distances each day, the school is usually situated near the children's homes, and the three- and four-year-olds hop and skip happily to school.

The school buildings are of the open-air type, one story high, with verandas which give free access to a large garden and playground, and the whole site is safely and suitably enclosed without any sharp and dangerous spiked railings or fences, while every exit is under observation.

On arrival each child is inspected by a trained observer for skin conditions, cleanliness, colds,

catarrh and the commencing symptoms of infectious diseases, and the necessary treatment is at once provided. This inspection should never be handed over to an unskilled person, and in many cases it is usual for the School Nurse to pay a daily visit to the Community Nursery. Only so can the spread of infection be avoided and the development of physical defects prevented.

A Nursery School has dangers peculiar to itself against which precautions must be rigorously taken. The greatest care must be exercised to prevent children infected with disease from entering the school, for at this age little children are very susceptible to infections, and the younger they are the more serious the after-effects of the illnesses are likely to be. Each child undergoes a thorough medical examination on entering the Nursery School, and is frequently inspected afterwards. A doctor must be available for consultation at all times, and, with the superintendent of the school, should be in close touch with public health services, such as Welfare Centres, clinics and hospitals, so that proper medical treatment may be secured for any child needing it. One or more rooms for isolation purposes and for the use of the doctor and nurse need therefore to be set aside in the school building.

A part of the training given in the Nursery School is the cultivation of good health habits, and the first occupations entered upon by the little ones are concerned with personal hygiene. Adjoining each play-room are the cloakroom, bathroom and lavatories for the children using that room, and it is important that ample accommodation in this direction should be

provided, so that there may be no long waiting for turns to use baths, basin or toilet, and no consequent distaste for the whole business of washing and cleanliness. Water is naturally attractive to children, and when splashed over the body is a tonic to the skin and stimulates circulation and digestion. The little ones enjoy bathing and paddling in the long shallow bath provided and associate this fun with clean bodies. They soon learn to prefer cleanliness to dirtiness and will come and show clean hands and faces to their teacher for approval.

Every child is provided with the necessary toilet accessories, a washing-cloth, a towel, a tooth-brush and a hairbrush and comb, and each article is marked clearly with his own name or, in the case of the very little ones, with a sign which he has chosen for his own. After use everything is put back in its right place.

Training in habits of order and personal cleanliness plays a big part in the daily routine. Each newcomer is encouraged to hang up outdoor clothes tidily, he is shown how to roll up his sleeves before washing and how to turn on the tap for water and to wash hands and face with the utmost care. He learns how to brush nails and teeth and to leave the basin clean and ready for another's use, and to dry himself thoroughly. A mirror is provided at the right height, and the children learn to brush and comb the hair carefully in front of it. The children are also trained to visit the toilet at regular times, and are taught to button and unbutton their clothes, to flush the toilet after use and, finally, to wash the hands.

It is most important that the habit of keeping the nasal passages clear at all times should be formed. With stuffy noses, children's breathing is restricted, and their general health impaired. In the Nursery School the children are taught how to use handkerchiefs properly when coughing and sneezing and to keep the nasal passages clear. They are encouraged to attend to themselves in this matter as early as possible. The teacher sees that a supply of paper handkerchiefs is available in every room, and trains the children to place them, when used, in receptacles provided for the purpose. They are then burnt as soon as possible by a member of the staff.

In the cloakroom, members of staff often take the opportunity to give the mothers some direct teaching in rational clothing for infants, and a supply of suitable patterns, such as those published by the Association of Maternity and Child Welfare Centres, is generally kept for lending purposes. Suitable clothing is one of the requirements essential for good health, and all garments worn by little children should be light and should allow complete freedom of movement. Heavy, tight-fitting or ill-fitting clothes prevent a child from doing what he wants to do : they tire, fret and anger him. Plenty of room at the armholes must be secured and at the fork in the knickers. Failure to secure this last leads to discomfort and, possibly, bad habits. Clothes must always be easy to put on and take off, and fastenings should be easily managed, so that the children soon learn to dress and undress themselves. In order that they may be kept sweet and clean all garments must be simple to wash and iron ; and a



The Doctor  
Medical Treatment.

PLATE X.



Bathing in a Nursery School in the East End.

PLATE XI.

Nursery School usually provides accommodation for some laundry work, where bibs, towels, overalls and knickers may be washed. Dressed in brightly coloured overalls the children leave the cloakrooms.

In some Nursery Schools it is necessary to supplement home breakfasts, and in these cases a meal is provided early in the morning. This is served and cleared away by the children themselves, and proud little helpers wearing mackintosh aprons set about the business of washing up mugs and plates.

Whenever possible the children play out of doors, and the garden or playground is a most important feature of the school. It should not be planned merely as a decoration for the building, but should be a real playing place, sheltered from the cold winds of winter and full of attractive and interesting things to watch and care for. We have done, and still do, great harm to the little child's personality when we enclose him in the prison-like rooms of some of our schools, with their high-up windows, through which it is impossible for him to get a glimpse of the sky and outside world.

It is best for a part of the playground near the building to be paved, for this will dry quickly in wet weather, and will always provide a level stretch for the carts, prams, trolleys and other wheeled toys which are the delight of the two-year-olds. There should also be a grassy place where daisies grow, trees to give shade on hot summer days, slopes to run up and roll down, shallow steps to climb and, above all, plants and pets to be tended and cared for.

During the impressionable years of infancy little



children need to be surrounded by life and growth, and the inadequacy of many Infant Schools in this respect is greatly to be deplored. Brightly coloured inanimate apparatus and toys which the child can master may be found, but living things are often wholly absent. We seem to forget that the simple dependence of living creatures makes a strong appeal to the gentle and tender side of child nature, and that to be greeted by joyful barks and wagging tails affords very deep satisfaction. If we allow children to grow through these early years without establishing sympathetic relations with living things (and this can only be done by personally caring for them day by day and by helping to provide for their comfort and happiness), they will not care for and reverence life in their later days. They may regard all forms of life with interest and curiosity, but love, respect and tenderness are likely to be absent. Provided that the teacher is sufficiently enthusiastic and interested to take the necessary trouble—for it is obvious that children in the nursery stage cannot take sole responsibility for the food and comfort of living creatures—rabbits, guinea-pigs, doves, pigeons, goldfish, a cat, a dog, tadpoles, snails, are all possible school pets. And although very young children are not capable of the steady patient labour and planning by which alone a beautiful garden is created, yet the gardener's activities, digging, planting, sweeping, watering and plucking, make a very strong appeal to them, and they prove his most willing and imitative helpers. One seldom witnesses such joy as that expressed by a group of five-year-olds when their lunch included their own-grown radishes and

mustard and cress, and it is in early joy-giving experiences that later practical and intellectual interests have their roots.

Earth, sand and water are natural play-materials, and the well-equipped playground always contains a digging corner and a sandpit where the children can dig as much as they like. In warm sunny weather a "sportapool" for bathing and wading gives endless delight, and real experience of water and its powers.

If the weather is unsuitable for out-of-door play, we may see the little ones busily occupied in well-ventilated playrooms, which have been specially planned and furnished to allow them that complete freedom which is their most crying need if they are to achieve healthy many-sided development.

In Victorian days rooms and furnishings were rarely chosen for a nursery because they suited the special needs of childhood; rather were they selected because they appeared to be unsuitable for other family requirements. The outlook was not pleasing, the ceiling too low, and pictures and furnishings unwanted elsewhere found a home in the nursery.

But a modern nursery is equipped to meet the needs of the children who are to use it, and a lofty, airy and spacious room is set apart. Walls are smooth and washable, often painted the colour of sunshine, and on them hang pictures which tell a story. The furniture is of the right size and height, and many suitable and colourful toys are supplied, together with low cupboards in which they may be stored when not in use. Windows are wide, and whenever possible look out on a garden; and boxes, in which each season's

flowers grow, stand upon the ledges. For adult imaginations have been stirred and we picture to ourselves what it must be like to spend all one's time in rooms where everything is out of reach, and almost everything too big for use. We realize, too, the tremendous loss of experience entailed when a little child is continually prevented from managing his own affairs and is forced to depend upon adult assistance.

The principle that surroundings and training, physical care and nurture are so closely bound together that they cannot be dealt with separately is now beginning to be put into practice in many homes. We know that the material environment contributes not only to the child's physical health but to his mental and emotional health. So when we are establishing Community Nurseries or reorganizing existing Infants' Schools we should not revert to the mistaken customs of a bygone day and take over the buildings and equipment suitable for the schooling of older boys and girls. We must secure modern nursery rooms, furnishings and conditions.

In order to exercise and develop his physical powers the little child needs space and freedom to move about, to run and skip, to jump and climb. How can he do these things in classrooms filled with heavy desks and in space only sufficient to accommodate him sitting down?

In order to grow intellectually a little child needs freedom to handle his own business, to examine the interesting things which everywhere abound in this new and unfamiliar world, to choose and select objects with which to play, and how can this be done if they

are shrouded in mystery on shelves or in cupboards high above his head?

In order to develop his powers of speech and to strengthen his lungs a little child needs to talk freely, to sing and shout and laugh, perhaps to hoot like the railway engine or motor-car, and this cannot be permitted if older children are busy at their studies near at hand.

Playrooms should open out directly to the garden, and since very little children are most sensitive to sound it is advisable to provide an easily moved partition, which will make it possible for quiet and noisy occupations to occur simultaneously as required by the children.

Floor coverings must be such as will not chill the children when kneeling or sitting at play on the ground, and they must be suitable for frequent washing and cleaning.

Low chairs and tables painted in cheerful colours are needed, and cupboards of the right height in which toys and apparatus can be stored by the children themselves. Sharp corners must be avoided, to guard against bruised bodies and gashed heads.

There is considerable nervous strain on young children when they are associated in large numbers, and it has been suggested that from 30 to 35 children is the largest number that can be grouped together without harm. Playrooms, therefore, are usually planned to accommodate such a group under the charge of a fully trained teacher. It seems incredible that it should be thought that one woman alone can effectively care for 30 to 35 children of nursery age,

and achieve what is really meant by nursery education, namely nurture and training. The children's physical needs alone demand more care and supervision than she can possibly give. Besides, accidents to individuals occur and must be dealt with ; and in the meantime what is to happen to the remaining children ? Are they to be left without supervision ? To carry out her duties satisfactorily each fully trained teacher must be assisted by two full-time helpers, who will act under her direction. It is ridiculous to think that freedom with safety can be allowed otherwise. The ideal grouping is not more than 10 to 15 children under the supervision of an adult.

The poet Drinkwater once said that people could be divided into two classes, namely, those who wish to dominate and those who wish to understand, and it is important that only those belonging to the latter class should fill the post of Nursery School teacher. For it is not the business of such a teacher to prescribe occupations continually and to direct activities ; rather must she watch and follow the playing children, give help when called upon and answer questions. Her main duty is to secure for the children more and more opportunities for the exercise of their natural powers, and to put them in touch with ample material which will stir them to activity and so promote growth in thought and feeling.

In order that the young child may learn to adjust himself to a community it is necessary for him to have the companionship of children of his own age, and in the Nursery School he is allowed to make social contacts at the rate at which he himself desires.

Many two-year-olds do not play with their fellows, although they often spend much time watching them. During the ensuing years, however, social and co-operative play steadily increases, and in this play attitudes of love, trust, helpfulness, gratitude and kindness towards others may be awakened and developed. By shared work and interests the feeling of community is fostered. "This feeling of community first uniting the child with mother, father, brothers and sisters . . . is the very first germ of all true religious spirit, of all real yearning for perfect union with the Eternal."<sup>1</sup>

Love and affection for others will be helped to grow in the nursery years if opportunities to serve and to be served are secured for each individual. In imitation of his elders a little child will quite naturally help and care for those less experienced or less skilful than himself, and will take great pleasure in feeding and protecting pets, and in caring for plants. In certain occupations, when dealing with heavy or unwieldy material, a helper is welcomed, and the general requirements of the Nursery Community make frequent calls for service upon all its members. In such ways, through direct experience, the great idea of the interdependence of all things is approached and can be expressed in songs, games and stories. In *Mowing Grass*<sup>2</sup> the little child is shown how his food is prepared, and is encouraged to give thanks to the many helpers, to Peter the mower, the clover, the cow, to Jenny the milkmaid, the baker and Mother, until

<sup>1</sup> Froebel.

<sup>2</sup> *Mutter und Kose-Lieder*, Froebel.

finally he learns that the field can yield no crop unless power and material are placed therein. So, very gradually, through imaginative and emotional observation of Nature and of man's life, he reaches the idea of an Unseen Helper, a Giver of Life, and begins to appreciate His care and love.

Teachers in some Nursery Communities will certainly desire to ask their Father's blessing and help in the day's work and may wish to include in the programme a short and simple prayer together with hymns of praise and thanksgiving for the many evidences of Divine Love which are within a child's experience. Songs of praise and thanks for food, warmth, light, shelter, clothing, kindness and love, such as are to be found in Carey Bonner's *Child Songs*, are sung by children of four and onwards with much delight, for the words are the expression of what is in their minds.

Young children are always eager to join in the activities of their elders, and are impressed by the teacher's attitude of devotion and reverence when "speaking to God." By a primitive sympathy they can appreciate this and will distinguish very quickly between what is real and what is conventional.

Through playing with others a child gradually learns to understand simple property rights. He begins to realize that he cannot take Jim's engine without Jim's permission. He learns to give and take and soon finds that he cannot take all the choicest things for his own play, but must select one article and leave the rest for others to choose from. He learns that other children have rights of their own, just as he has, and finds that disaster follows if he high-handedly takes a



Washing Oneself.  
Caring for Pets.

PLATE XII.





desired toy from another child before that child has finished with it. He learns, too, to help and co-operate with others in play, and also to refrain from doing so when his help is not desired. A child on a swing may, or may not, desire to be pushed, and undesired assistance is promptly and very plainly rejected.

In suitable surroundings the child in the Nursery School spends happy morning hours, free to play with the many playthings at hand, free also to look on at others working and playing, for such quiet times are valuable and contribute much to the personality.

As midday approaches the natural appetite of hunger begins to assert itself, and preparations for dinner are made. It is too disturbing and tiring for very little children to make several journeys to and from the school each day, and so attendance at a Nursery School is usually for the duration of the whole day. Meals are therefore provided, and a kitchen and larder are necessarily parts of the building.

Right feeding is essential for continued health, and if a child is incorrectly and insufficiently fed his physical growth may be checked and his resistance to disease considerably lowered. If this state of affairs is allowed to continue for a long period, chronic disease will probably occur. In many cases it is absolutely essential for home feeding to be supplemented by the school. The teacher can thus make sure that a sufficient amount of food is taken by the child, that, in the food supplied, there is a proper balance between the three great classes of foods, namely proteins, fats and carbohydrates, that the supply of vitamins and mineral salts is ample, that the

food eaten is digestible and sufficiently hard and solid to exercise the jaws and teeth, and that sufficient water is drunk. Suitable menus and recipes for children's food during the nursery stage are to be found in *Nursery School Diet*, a pamphlet published by the Nursery School Association of Great Britain, and also in *The Care of Children from One to Five Years*, by Dr. John Gibbens, published by the Association of Maternity and Child Welfare Centres. It must always be remembered that the appetite and the secretion of necessary digestive juices are stimulated by the dainty appearance of food, and Nursery School meals should therefore be served attractively.

Dinner-time not only assists bodily development but also provides opportunities for gaining skills and for social training. The children are shown how to lay the table, to set chairs and to include a vase of flowers as decoration. Hands are always washed before food is taken, and little groups of 6 or 8 children seat themselves at every table. Grace is sung, and the food is served and carried to each one by other children chosen to act as waiters and waitresses. The children learn to use spoons and forks correctly, to pass plates politely and to drink with empty mouths and without making an unpleasant noise. All this is achieved mainly by the natural method of imitation.

By "good manners" we mean habits of consideration for others, and these are developed chiefly by receiving consideration from others. For example, a two-year-old in a Nursery School politely passed his plate to a child who had been overlooked by the young waiter serving at the table, for he himself had lately

received this consideration from his teacher. Little children are always quick to *do* what their elders *do*, although they often disregard what they *say*. Meal-times are times of great enjoyment to the young child, for his natural appetites are being satisfied ; and the training in good table manners is readily accepted because of its happy association. Above all things we must refrain from worrying the little ones too much about table manners, for it is well known that many digestive troubles in adults have been brought about by stern and prescriptive treatment at meal-times during infancy. In serving and preparing for meals the children learn to perform many actions involving muscular control, such as lifting, lowering, carrying and pouring ; and however irksome it may be for the adult to watch childish bungling, he must refrain from doing these things for them. It is through practice alone that skill is gained, and many of the clumsy and diffident children met with in Junior and Senior Schools owe these defects to the fact that their busy mothers would not, or could not, allow them to perform elementary actions in infancy.

After dinner, tables will be cleared and crumbs brushed up. Hands may need to be washed and teeth brushed, and afterwards a run in the garden usually follows—for digestive purposes. The time has now come for rest and sleep, and regular periods for this are secured every day. If possible the children sleep out of doors, or if indoors, in the well-ventilated play-rooms. Stretcher beds are easily procured nowadays, and a storing place for them needs to be provided. They should be light and strong, offering no

danger of pinched fingers when put up or taken down by child helpers.

Every child is provided with a coverlet, which should be light and warm; very satisfactory ones have been made by joining knitted squares together. On their beds the children sleep quietly and restfully as long as they need to do, and in the late afternoon one after another awakes soothed, refreshed and happy. They tidy themselves, visit the toilet, and are ready to play again.

A final occupation is often looking at picture-books, or listening to stories; or a song may be sung, or a round game played.

The importance of routine and regularity in nursery life has long been recognized, for it creates that atmosphere of security, peace and order so necessary for the well-being of young children. Meals and times for rest occur at the same hour each day, and this naturally fixes times for attention to personal cleanliness and for visits to the toilet. Apart from these fixtures, the daily programme is determined by the interests and needs of the children, and they select their own activities. The wise teacher, however, encourages the little ones to take responsibility for certain little duties in the community, such as tidying rooms and cupboards, watering flowers, cleaning silver, altering the calendar, arranging chairs or acting as servers and messengers.

It is desirable that out-of-door play should be given as much time as possible, but the amount will, of course, vary according to the season. Many teachers try to secure that active and quiet play alternate, and,

in order to present suitable and interesting material and activities unlikely to be approached and developed without a teacher, such as songs, rhymes, stories and the care of plants and animals, they usually find it advisable to include some simple form of organized group or circle in the day's play. Such circles provide more experiences in social adjustment. The children learn to take turns in talking and choosing and to abide by the choice of the group. They are also introduced to attitudes of politeness and consideration for others by the teacher's example as a member of the group, and they imitate her behaviour.

At first it is desirable that the time allotted to group activities should be very short, but as the children grow through infancy the periods may be lengthened. In no case should there be compulsion to join in a group. A child will sometimes wish to continue his individual occupation, and should be free to do so, provided that it does not interfere with the activities of the rest. In actual practice one finds that children very soon slip into routine and readily accept the customs of the community, provided that they are given sufficient time in which they may direct and control themselves and carry out their own plans and purposes.

It will be seen, then, that the activities pursued in the Nursery School include attention to health and personal hygiene ; household duties ; movement and constructive play, including romps, rhythmic plays, imitative and dramatic play and play with toys and materials ; the care of pets, gardening and exploration of the natural world ; language-expression, including story, song and conversation.

After a full and happy day in the Nursery School, allowed in freedom to expend their energies in legitimate and profitable ways, cared for and protected by those whose special study is the process of child-development, the little ones go to the cloakrooms to get ready for home. Fathers, mothers, elder brothers or sisters arrive to take them away. Push-chairs and perambulators are wheeled off. There is much to be shown and said ; and refreshed by change of scene and companionship, delight in reunion is plain to see in the faces of both adults and children.

## Chapter 7

### SOME FORMS OF PLAY AND PLAY-MATERIALS

THOSE whose teaching experience goes back over a quarter of a century will remember with what scepticism and even hostility early attempts to introduce play ways into school were met. "Whatever you do, don't send him to *that* school, they do nothing but play and clay modelling, no work at all!" was the solemn warning given to many a young parent about to send her child to a first school.

To-day, however, few responsible for infant education would publicly deny "that numberless spontaneous activities of children, plays, games, mimic efforts, even the apparently meaningless motions of infants . . . are the foundation stones of educational method."<sup>1</sup> For this truth has been stated over and over again by psychological authorities, and has been successfully put into practice by many pioneers in educational reform. Nevertheless, far too often lip service alone is paid to this precept, and old school methods die hard. Many little children in homes and schools are still subjected to methods of compulsion and direction instead of being introduced to the free self-discipline of play. Playing children are to be seen in the streets or on beaches, in parks and gardens and in some good nurseries and schools; but in many schools what passes for play is a lifeless and teacher-directed activity.

It has already been pointed out that true play is something which the child himself decides to do, and

<sup>1</sup> Dewey.

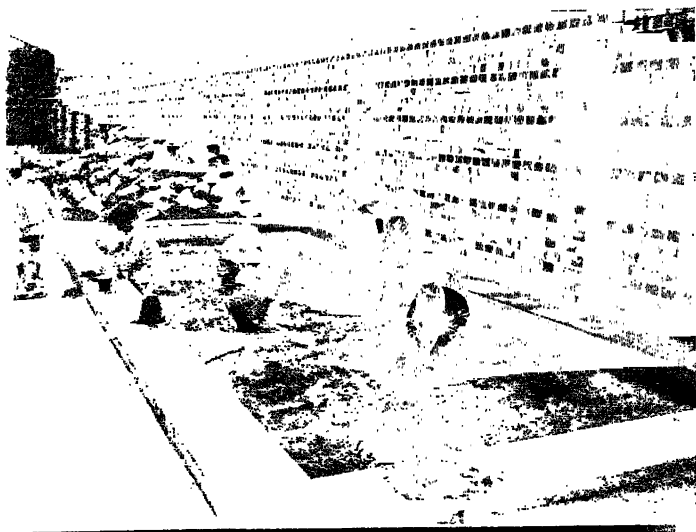


not something he is told to do. Many, however, continue to think of it as a game or occupation devised by the teacher to keep a child happily occupied while she slyly and secretly imbues him with facts and information which she considers likely to be useful in later life. Not wholly convinced by the findings of psychologists, many appear to be afraid to wait upon a child's present desires and purposes, which alone give rise to true play, and instead hurry on ahead, continually crying, "Look! Listen! Wake up! Be quick!"

The provision of suitable toys and play-materials constitutes an important part of the Nursery and Infant School teacher's work, for desire and effort are stirred in the little ones largely by the material things around them.

### *Bodily Exercise*

When children are free to follow their own wishes and to direct themselves they engage in various forms of play, one of which is bodily exercise. A young child performs the movements of everyday life, such as walking, sitting down, rising, lifting, lowering, carrying, shaking, throwing, pulling, running, climbing, sliding, balancing, with keen delight and will repeat these over and over again. He enjoys the movements necessary in the care of the body, such as washing, brushing, combing, buttoning and tying; and imitative games involving these actions are also enjoyed. He delights in pounding and hammering, in digging, in pouring; in short, in many and varied forms of movement, for his body and physical powers



The Sandpit.

Swimming.

PLATE XIII.



are new and interesting to him, and he finds satisfaction in using them.

By means of free movement a child learns many things about the world around him, and his urge "to get to know" keeps him "never still." His ceaseless striving and efforts to move about and to use his body in different ways are natural methods of exercising and exploring, and it is by this means alone that he can gain bodily skill and poise, and the power to co-ordinate movements. This need for free movement does not disappear at four or five years of age, but is present throughout infancy; and provision for it should be made throughout the reorganized Infant School. Children under eight kept sitting for long periods at tables or in desks undergo severe nervous strain, the evil results of which it is hard to estimate.

Let us picture to ourselves the little child to be met and dealt with in our Nursery and Infant Schools, with his "long-sighted eye and small undeveloped hand." When we watch him going about his business he appears to find difficulty in performing what seem to us to be the simplest actions. There is little co-operation between hands and eyes, between feet and eyes or between the two hands. Things are so often knocked over, heads are bumped and fingers are pinched; and in the cloakroom, it is a struggle to hang up coats, to open slipper-bags and to button shoes and gaiters. Then, too, we see unnecessary movements performed when certain things are being done. When drawing and cutting, the tongue comes out and movements are made to accompany those of

the hand. When dancing, the little hand turns outwards to help to achieve a carefully pointed toe.

Children have to develop the power to co-ordinate movements and to do what they want without performing unnecessary actions. They can only learn to do this by practice. Therefore the teacher of young children should not always put away apparatus and toys, and button up coats and shoes, even though the children are tiresomely slow in doing these things.

Madame Montessori devised certain pieces of apparatus with which children might practise such activities as buttoning, lacing, tying and buckling, which are necessary for dressing themselves, and during the stage when activity alone is all-absorbing these often make a real appeal to the child. We must, however, bear in mind the fact that the most vital experience always has its rise in the real needs and business of living, and make sure that actions required for dressing are not performed on frames alone. A group of children were once seen hooking, tying and buttoning on frames in the classroom with the greatest ease and skill, but in the cloakroom their coats and shoes and scarves were briskly buttoned and tied for them in order to get them off home quickly! In agriculture, work cannot be finished according to the clock, and it is the same with child culture. Those who desire to be free the moment the clock strikes the hour had, therefore, better not undertake Nursery Education.

Actions such as carrying, pouring, serving at table, washing, sweeping, polishing, cleaning, gardening are all necessary in the daily routine of the Nursery School,

and the children should be called upon to co-operate in them.

Over-expensive apparatus to help in promoting healthful bodily exercise out of doors is not necessary, and much can be home-made. In childhood most of us enjoyed balancing on a kerb, or stepping into the squares of a paved or tiled path like Christopher Robin. We enjoyed jumping over obstacles placed on the floor, we crawled under seats and benches, we were allowed to climb certain walls and certain trees and we made slides and see-saws with planks and boxes. We must provide things which can safely and legitimately be used for bodily exercise, otherwise valuable property and furniture will probably be appropriated and may be damaged or used in dangerous ways for climbing, sliding and swinging. Many a cupboard door has sagged on its hinges, having served as a swing for active little bodies, and a slide has been made by fixing two legs of a table upon the dining-room sideboard!

Jungle-gyms, chutes, slides, swings, see-saws and ladders call the little ones to exercise their bodies out of doors. Balls, wooden hoops, spades and other gardening tools, wheelbarrows and rollers are all useful to strengthen the arms. Help in walking may be given by prams, push-carts, trolleys and wheeled horses beloved by the two-year-olds, while motor-cars and tricycles can be managed by the four-year-olds and help to strengthen the legs.

Indoor apparatus and toys such as wooden engines, rocking-horses and boats, carts and horses, balls and bean bags, must be provided for rainy days, and a

sand-table should not be forgotten. When supplying toys and apparatus for the use of infants we must bear in mind the fact that larger movements should be allowed to ripen first and finer skills much later, and should provide toys and playthings of a nature and size to accord with this principle.

### *Sensory Experience*

We all know from experience that the young child does not stand still to admire the new and attractive things he meets in the material world, but touches and handles everything within reach. And if we continually cry "Sit still! Don't touch! Put it down! Leave that alone!", not only do we deprive him of the sensory experiences by which alone knowledge of the outside world can come to him, but we permanently injure his personality and make him give up trying to assert himself and master his environment. The products of such early training are too often met with in later life. Too many individuals wait to be told exactly what to do and seem unable to plan or initiate anything themselves.

In Community Nurseries, then, there must be a plentiful supply of toys and materials to be touched, handled and played with. Boxes, reels, shells and corks, together with plastic materials, such as clay and plasticine, paper, crayons, chalks and paints, are necessary; and a variety of specially prepared sense-training apparatus, suited to the child's particular stage of development, is also desirable. We should not, however, fall into the error of thinking that sense-training is given only by the use of specially prepared

apparatus, for much sensory experience is, of course, gained by the children in their general games and play.

The occupations of washing and ironing enjoyed by all small girls provide experiences of differences in temperature and in texture. Distinctions between "Too hot," "Too cold" and "Just right" are made. When dressing dolls, clothes and materials are handled and selected for their colour or softness or size, as the case may be. When building, if the blocks provided offer many varieties in size and shape, the finest discriminations in length, width, weight and form will be called for. In addition to exercising the muscles, pounding and hammering, the beloved occupations of the tinies, if performed with different tools and on different surfaces, give experience of different sounds and tones; and the choice of instruments for special purposes in the percussion band calls for discrimination between loud and soft tones, high and low sounds.

Many of the old Kindergarten guessing games also give practice in sense-discrimination. For example, a child stands blindfolded in the centre of a ring. The children in the ring sing :

"I have something in my hand.  
You must guess what it may be.  
But I hope you understand  
You may touch but must not see."

[smell]  
[taste]

A large bunch of flowers, brought to decorate the lunch tables by the children of enthusiastic gardeners,



may be shared according to colour; red and orange for the babies, pink and blue for the threes, and so on.

Formal apparatus, such as the Montessori Didactic Apparatus, usually appeals to the twos and threes, for it calls upon them to use their senses to look, listen or touch: and their strong impulses to imitate and repeat stir them to perform exercises which involve making comparisons and choosing between the various objects in a group. It is the business of the Nursery School teacher to study the possibilities that lie in any piece of apparatus she introduces, and she should make sure that there really is something to do with it, and something which is likely to stir the children to compare, select and grade.

If a toy or piece of apparatus merely attracts the eye or the hand for the moment it is of little use, but if it stirs a child to move, to sort, to match, to pair, to grade in order to bring about a desired arrangement or situation then attention and concentration are exercised by its use. Imagine what happens when a little child encounters a nest of boxes. His urge to explore drives him to handle it, and soon he discovers that it comes to pieces. When the various boxes are scattered around him, he probably plays contentedly with these, fitting one into another and taking it out again, all the while receiving visual, tactile and muscular sensations. Then perhaps he sees a nest miraculously reconstructed, and he tries to do the same. To accomplish this he is forced to note differences and to choose between the various boxes in order to arrange them in a graded series, making

finer discriminations in size than he previously did. Size matters to him, and in other plays he again finds himself helped or hindered by similar perceptions.

Such experiences are retained and associated one with the other, until gradually his mind frees itself from the concrete, and relations expressed by such terms as *larger* and *smaller* become the object of thought rather than the concrete things which were first perceived. In such ways he builds up his fundamental ideas of size, weight, length and shape.

In the past we seemed to think that it was enough for the teacher to hold up concrete things for the children to see, while she explained in words their likenesses and differences. She alone received tactile and muscular sensations from these objects, and on her mind impressions were made, but the children repeated words and terms which had no real meaning for them, unaccompanied, as they were, by preliminary sensory experience.

The child himself must touch, handle and arrange, for mental activity has its rise in physical activity. Apparatus for sorting, pairing and fitting can be procured, and much can be made from waste materials, for example, with boxes, reels, stones and buttons. Nests of boxes, posting boxes, shapes and beads of various sizes and colours for threading involve sorting and matching; also jigsaw puzzles, insets and bricks for building provide such exercise. Much can be made with a fretsaw and plywood. When making apparatus we must secure that in every case there is really a definite and single purpose to be achieved by the child, that whenever possible the

apparatus is self-corrective, that the material is reasonably strong and durable and capable of being kept clean, that splinters of wood and sharp edges are absent and that we provide a box, bag or case in which each puzzle may be packed away securely and neatly. In play with such apparatus much muscular control is gained, mental progress made and habits of orderliness and tidiness practised, for the Nursery School child is trained to leave material in order for another child to use.

The too-seriously minded young teacher should, however, be reminded that the children under her care are not consciously setting out to gain bodily control, or to build up abstract ideas: and they are not "naughty" when they reject the frame or box she sees to be so full of educative possibilities. These little ones must set themselves their own tasks. We may provide materials, and even show ways in which they may be used, but we must leave it at that, for children in the nursery and infant stage are not yet capable of long-continued voluntary attention and concentration.

### *Expression*

When free to follow their own devices little children often repeat their own experiences in play. In a café a small boy and girl ran about very noisily while their mothers chatted over their coffee. This activity, however, was presently forbidden, and the elder child was next heard to say, "Now, Jimmy, put this bag under your arm and take hold of my hand. See, you're my mother taking me to town," and they proceeded to walk slowly and sedately in and out of the

tables. Personal experiences may actually be repeated by the child himself or with toys and symbols standing for himself. Dolls, teddy-bears and other toys are made to go through the daily routine of his life: they are fed, washed, dressed, undressed, taken to the toilet, put to bed and have birthdays!

Amongst other things, a little child is very much interested in the many physiological experiences which he undergoes and may be helped to externalize these interests by tending and caring for living creatures with bodily needs akin to his own, and to understand his own experiences better by performing such actions as pouring, filling, emptying and filling again.

Adult standards of propriety often incline those who have the care of little children to repress sternly the impulse to play out personal experiences and, as it has already been pointed out, the suppressed interest for ever lurks in the child's mind unsatisfied and unchanged, causing neurotic behaviour, and using up energy and power which should be available for the development of new interests and experiences.

A child's physiological experiences are bound up with his other experiences, and if we provide buckets, bowls, jugs, jars, funnels, pipes, watering-cans and spades, to use with earth, sand and water, he will usually express his impressions safely in his own way, and at the same time derive much new and interesting experience in the use of these materials and articles.

"Failure to understand and assimilate infantile experience leads only too often to failure to assimilate and understand adolescent experience and this failure

in its turn leads to the stunting and malformation of the whole of the rest of life.”<sup>1</sup>

### *Make-believe Play*

At some time or other most of us have had our friendly advances coolly disregarded by a baby, while his whole attention was riveted on the bag or umbrella we carried. Very little children, at first, are often more interested in things than in people, and this interest in things continues throughout infancy. Round about the age of two and a half to three and a half years, however, they begin to be much attracted by people; they watch them and often imitate them, somewhat embarrassingly. For example, a small boy possessed a rather noticeably stout aunt, of whom he was very fond, and he was seen to sit at table with his chest puffed out and thrust forward in imitation of her figure. Imitation of people's ways and habits will occur whether we desire it or not. It is not due to rudeness, but is the child's natural method of getting to know and understand other people by becoming like them. This is the great time for learning manners, and the child imitates what the people around him really do and say, and not what they direct him to do and say.

From about the age of three years and onwards children are constantly being other people, and, of course, other things too, and in so identifying themselves much self-control is exercised, for they must keep in check their own impulses in order to behave as the admired object or person behaves. In such

<sup>1</sup> Lowenfeld.

play knowledge and understanding of new situations is gained. A four-year-old arrived at his Kindergarten as Foxy, a much-loved terrier, and gained great skill in moving about on all fours, while he practised a variety of barking sounds, until the lure of his contemporaries at the sand-pit compelled him to become himself again !

We must not impatiently and high-handedly interrupt this play and treat it as of no importance, for by so doing we arouse feelings of resentment in children and frustrate their natural strivings to learn.

The people and things with which a child identifies himself are naturally those with which he comes into personal contact, and his play is helped by toys and miniature reproductions of the things used around him in everyday life, such as, for example, brushes, mops, spades, buckets, ladders, hobby-horses, carts, motor-cars, trays and tea-sets. With these he imitates actions like sweeping, scrubbing, shaking cloths and dusters, at first exactly as he sees them and without fully realizing their purpose. For example, some crumbs had fallen on the carpet, and a brush was taken from a corner of the room, the crumbs swept up and the brush replaced by an adult. Immediately afterwards a two-year-old present repeated the whole procedure, although there were no crumbs !

Later this imitative play becomes more imaginative, and exact imitation gives way to a variation of circumstances. This play is often coloured by the emotional experiences undergone by the children, the representation of an overbearing and somewhat fierce teacher or parent being familiar to us all.

The subject-matter reproduced in the make-believe play of children between four and six is usually that which touches their own well-being or that of their family and friends. We find them imitating the other members of the family—father, mother, brother, sister and baby—and reproducing the daily occupations carried on in the home—cleaning the house, washing clothes, caring for children, shopping, preparing food, driving, gardening, drawing, writing and reading. Holidays in the country or at the seaside, birthday and Christmas festivities and “fireworks night” are all reproduced and played out again and again.

Later, as experience widens, we find the children representing occupations carried on by people in their neighbourhood. They are postmen, milkmen, tramway, bus and lorry drivers, window cleaners, sweeps, ice-cream sellers, roadmen, builders, greengrocers and other tradesmen: and, extending still farther afield, the occupations of the farmer, baker, sailor, fisherman, airman and miner are practised.

A warning to adults is, however, necessary, for influenced by the underlying idea of the interdependence of all things they often appear to think that accounts and descriptions of these occupations are interesting to the young child, and are vexed when he turns from them, showing boredom and distaste. They forget that the child's need is to play out his own direct experience of such matters, and that he has not sufficiently separated and reformulated facts for there to be much reality for him in the generalizations adults so glibly express. For this reason, too, the projects and

centres of interest worked out in educational magazines, and seized upon with such avidity by many a young teacher, often fall flat when she tries to work them out with the children in her class. In playing out his own experiences the child uses materials and enters into a variety of new situations which lead on to further activity and enquiry. Teachers have not to go about searching for unusual and unfamiliar things to serve as "projects" or "centres of interest." Every normal healthy child is brimful of interests and wonderings, and wants to do, to know and to make many things. His imagination usually plays about familiar and ordinary things. It is the teacher's business to listen to the children's talk, to watch them at play, and so find out what are the wonderings and desires that absorb them. Then she must help them to satisfy these in their play. "Education should be passive and following," said Froebel, "not prescriptive, categorical and interfering." Compared with those of the adult, a little child's images and ideas are necessarily vague and incomplete, but they are what he needs to express, and grown-ups should refrain from stage-managing play to suit their own more complete conceptions and from forestalling a child's efforts and enquiries.

Elaborate materials and properties to help in make-believe and representative plays are not required by the children, for by the power of imagination they will transform the things around them to meet their requirements. Grocery- and orange-boxes, packing-frames, cases, tyres, screens, clothes-horses, old chairs, tables, curtains, sheets and shawls—in fact, most



lumber can be adapted to make homes, tents, beds, stoves, boats, buses and shops.

In the sitting-room at home the sofa becomes a warehouse, the skin rug a pier and the carpet a stormy sea across which a merchant fleet of chairs and footstools is steered into port. This same power of imagination will operate in school, if we do not forestall its activity by providing the somewhat elaborate play houses and shops so attractively advertised to-day. What can we have for a house? What will do for a boat? These are problems to be solved by the children's own ingenuity and inventiveness.

In the case of children who come from homes where the play spirit is frowned upon, or where play-materials are scanty, it is, of course, legitimate for a teacher to supply a play house or shop to stimulate activity. But, in general, the greater the activity and creativeness of the children themselves, the deeper will be their joy in their play and the greater will be its educational value.

## Chapter 8

### SOME FORMS OF PLAY AND PLAY-MATERIALS (continued)

#### *Constructive Play*

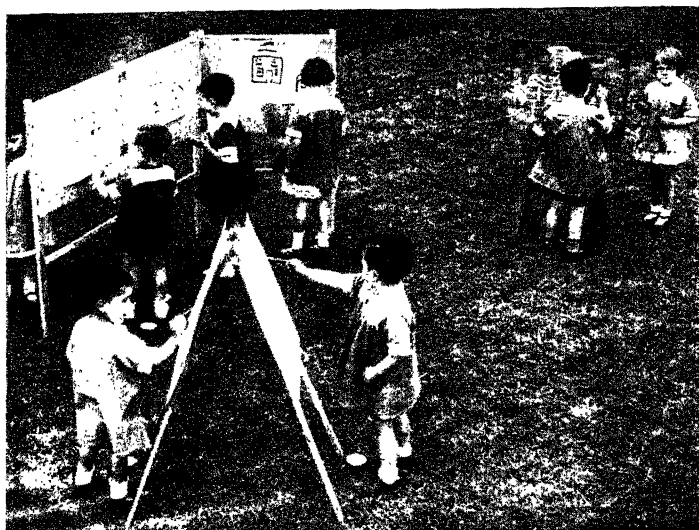
PROVIDED that material which is easily manipulated is available, we find that quite little children take pleasure in making things, for in so doing certain native impulses and tendencies find satisfaction: namely, the tendency to be physically active and to manipulate and handle material; the tendency to explore and investigate and the desire to be a cause and to master situations. In playing and experimenting with materials a wealth of experience is derived through the senses, and the characteristics of different materials are thus learnt. Some materials are more tractable than others, paper and clay than card, wood or stone, straw and wool than cane and cord, and the child discriminates between these and in time selects one rather than another for his purposes. Quite early he begins to see likeness between what he has produced in his play with easily manipulated material, and familiar things around him. For example, a folded paper is a tent, a boat or a book; a box turned over is a house, and the lid a door.

At first little children are not capable of working step by step to achieve a predetermined end; they cannot check and control their present activities by the thought of the goal.

Play "hunt the thimble" with a four-year-old, and you will find that he cannot control his eyes and keep them from looking towards the "secret" hiding-

place which it is your business to discover. Play netball with children of six or seven, and you will find that few are able to direct the activities of running and throwing consistently towards the goalpost, for they become wholly absorbed by the actions themselves, and throw and run even away from the post!

The power to relate means to ends, cause to effect and to work according to plan grows gradually, but some progress in this direction is apparent towards the end of the Infant School stage. In our zeal to promote the growth of this power we must take care not to outrun its development in the individual child. When the outcome of manipulative play is a tent it is certainly permissible to suggest that a flag would look well on it, or if the construction is a house we may enquire for a door, or a chimney, and so start the child on the road towards working for a purpose, and ordering his actions to achieve it; but only harm comes from forcing little children to work step by step for ends visualized in the teacher's mind alone. In the past we rarely allowed experiment a place in school occupations, but instead spent much time thinking out graded steps and stages, by means of which houses, chairs, tables and even objects unfamiliar to many little children, such as lighthouses and windmills, might be more easily represented by them. We seemed not to realize that it was only the teacher who saw why you should "Cut the folded edge of your paper, and mind not to cut the unfolded one!" Our careful and exact directions were followed for the most part only by the more capable children, and



Drawing and Painting.

Rhythmic Play.

PLATE XIV.



were obeyed without thought and understanding. Hence insincerity and habits of dependence were fostered in the little workers, and their self-confidence was undermined. The finished result, too, was often but slightly appreciated by the children, for their visual images of objects and surroundings are far from complete; and representations which in adult eyes appear crude and unfinished satisfy them, for they are the expression of their own ideas and images and not those of another person.

Unfortunately even to-day, in their desire to produce a good show of work, teachers sometimes slavishly follow the directions for making most attractive bags, boxes, houses or carts which appear in magazines, and dictate these to their little pupils. Thus no opportunity to originate, to be a cause, is given, and, indeed, often the only outlet for a child's creative energy left is in mischief and anti-social activity. It would be a great service to education if exhibitions of infants' handwork were prohibited!

The little child's early attempts at constructive work with material provide him with a very strong incentive to thought, for by its very nature it calls upon him to foresee an end, to devise means to that end and to judge the worth of the result when achieved. Children can and will think out problems when they see the need for such thinking. Results are apparent to them. Wheels that will not go round are "duds" in the eyes of the boy of six or seven years of age. How to make them turn is a problem that will engage his whole mind.

Craft has been defined as "the employment of

means to the accomplishment of some end, directed by knowledge and skill," and a little child's constructive play with materials is the early approach to this. Within every healthy child there is a desire to originate and create, and materials on which to expend this energy must be supplied. There is also a part to be played by the teacher. If building is on hand, let her build, too, adopting the children's purposes as her own and achieving them in her own way, not, of course, as a demonstration to the class, teaching a "right" way, but simply as a playmate. She will find that the children's efforts will often be reinforced by suggestions from her house or castle, and their eyes opened to further possibilities of use for their material. Like the adult the child attends to models and suggestions when he has tried to achieve some goal and has come to the end of his own resources. This is the moment when the wise and sympathetic teacher can set him on the way to solving his problems. People sometimes say: "But the children I have to deal with do not initiate anything. I feel bound to start them off with suggestions." This may be true of those whose creative desires have been constantly thwarted at home or elsewhere, or who have been denied materials for their use. If from the beginning we supply little children with materials which are easily manipulated and give them time to respond to these in their own way and at their own rate, at the same time making sure that their lives are full of vital experiences, the native impulse to create and to construct is unlikely to remain inactive. We must never forget that if children submit to being shown before

they feel the need for help they very soon cease to be able to do without it.

A little boy was once said to be perfectly content to ride about on his tricycle the whole day long, and to demand no other playthings or materials. His mother was asked if he was ever given opportunity for more creative play, and her reply was that she had no room in her flat for such things. She seemed to think that because he did the only thing he was allowed to do that he liked that occupation best. Children accommodate themselves to circumstances, and therein lies danger, for "the mind shut out from worthy employ, and missing the taste of adequate performance, comes down to the level of that which is left for it to know and do, and perforce takes an interest in a cabined and cramped experience."<sup>1</sup> Also, the apparent lack of initiative in children with regard to construction is sometimes the result of unwise criticism of their early efforts to make and represent familiar things. The worth of these attempts is too often estimated by the crude results produced (which, indeed, frequently bear but little likeness to the things represented) instead of by the thought and effort entailed in the making.

Grown-ups are prone to sweep aside childish constructions, and to urge the little ones to make manifest the more complete images in the adult mind. So the gradual process of growth is interrupted. The teacher's duty is to secure for the child opportunities for contact and close acquaintance with ever more and more things and situations whereby a fuller and more

<sup>1</sup> Dewey.



vivid experience of life may be gained, and this will give rise to the expression of clearer and more complete ideas and images.

Constructive play with material is at first individual and non-social, for in the early years children are not ready to join in making co-operative models in the way that older children in the Junior Stage love to do. Co-operative work involves visualizing clearly a whole, and making separate parts in relation to this. We can, however, encourage the fives and sixes sometimes to combine their separate efforts to form a whole. For example, houses may be put together to make a street, animals to form a zoo, aeroplanes to fill an aerodrome and flowers to decorate a bowl. In such ways the children make an approach to co-operative work and to the idea of mutual interdependence which underlies it.

To very little children of two and three years we must give prepared materials such as building blocks, large beads, corks, sticks, reels, boxes and string, and plastic materials such as clay, plasticine and sand, for these are easily manipulated. Older infants use these also, and we may include paper, straw, raffia and odds and ends of all kinds; and for the sixes and sevens, possibly card and wood. With these materials the little ones make and represent things with which they come in contact in their everyday life and which interest them.

The following is a description of constructive play in the babies' class of an Infants' School.

"We collected matchboxes by the score, and they take as many as six or eight each and make what they

think, having free access to any tools and other materials they require. The little girls (under five) make cots, and like rags to cut up for bed-clothes. Boats and trains are very popular. The box part of a matchbox with bits put in for shelves makes a lovely cupboard. I never tell them what to make. The children have worked ever so well with clay, making just what they thought and how they thought. The things they attempt make me gasp! No teacher would suggest them. A fireplace with all the fire-irons and a dog sitting in front and someone sitting in a chair by the side. They made some lovely dollies just before Christmas. My idea was to teach them to tie knots. They made a ball of some blue paper, put the white paper over its head and tied it round the neck. When they found they could not tie knots, they were shown, and readily learnt, they were so keen on their dolls. It was a treat to see them, even the little boys, hugging the paper dolls and singing 'Hush-a-bye, baby, on the tree-top!' When they made their lanterns for Christmas they were so pleased that they were able to tie the string by which to hang them up. They did so enjoy that independence."

Such methods put into practice the principle that all technical instruction must be given to young children when called for by the interests and needs absorbing them at the moment.

Another aspect of play with material is the child's desire to put into an outward form that which has deeply stirred his æsthetic and other emotions. This he does in movement and also in drawing, painting and modelling. Bright colour makes a very strong

appeal to a young child and gives him joy, and to cover a surface with paint or chalk or pastel affords a three-year-old deep satisfaction. Very soon coloured shapes and forms are produced, and these are related in the child's mind to things which seem to be similar; the green mass becomes a field, a circle and straight lines a man. Later more and more purposeful representations follow, and scenes and situations real and imaginary are depicted; and in these, familiar objects such as men, animals, birds, horses, trees and fields play a part. Children at first draw these things in outline, and their resemblance to the actual objects is very slight. The men have round heads, square or oblong bodies, and straight lines do duty for arms and legs. This type of drawing is a universal form of expression which must be provided for in infancy.

Non-poisonous paints for painting with the fingers on large surfaces of paper are procurable in bright colours, and painting can be begun in this way before a brush is introduced. Large sheets of paper and paint and brushes calling for free and vigorous movements of the hand and arm should be supplied before any fine work is attempted, also chalks and pastels which give little resistance. It has been said that drawing seems to be a natural aptitude, and gradually progress from the early type of drawings to more accurate records is made if children are encouraged to continue free self-expression in this way. For by free expression they spur themselves on to observe more closely and to record more and more characteristic details of the things they portray.

Insincerity results, however, if we are impatient

and encourage children to imitate and represent our adult vision, rather than their own.

After drawing a scene or object, a child of about five years is often interested to inspect the drawings made by other children, and should be given the opportunity to see them, as well as the teacher's attempt to portray the same thing, for in this way the forces of suggestion and imitation come in to help quite naturally.

### *Rhythmic Play*

It is plain to all observers of young children that quite early they show keen delight in repetition and orderly arrangement. At a concert in the Kindergarten one is usually obliged to suggest that the steady clap, clap, clap after an item is too prolonged and must now come to an end.

Children seem instinctively to express themselves in rhythmic movements and sounds. They run and skip, run and skip, in perfect rhythmic measure ; and in selling games are heard to chant regularly, over and over again, "D'you want any ice-cream? D'you want any ice-cream?" or any other wares which happen to be for sale. Their taunts are nearly always rhythmically expressed, "Cowardy, cowardy, custard! Cowardy, cowardy, custard!" has been cried by many generations with deep satisfaction.

"Those who regard the child as empty, who wish to fill his mind from without, neglect the means of cultivation in word and tone which should lead to a sense of rhythm and obedience to law in human life.

“An early development of rhythmic movement would prove most wholesome and would remove much wilfulness, impropriety and coarseness from his life, movements and action, and would secure for him harmony and moderation, and, later on, a higher appreciation of nature, music, poetry and art.”

These words were written over a hundred years ago by Froebel, but for the most part have fallen on deaf ears in the schools.

The universe in which we live is orderly and law-governed, and it is important that the child should be prepared for the recognition of this truth. He is not a being detached and isolated from the rest of life, but one of the units in its whole pattern. This vast idea comes very slowly to the human being, and we must neglect no means that will help in its formation.

Joy-giving experience, appreciation of restraint and obedience to law come to the child when he expresses himself rhythmically. He feels, hears or sees a pattern formed by units of movement, sound or shape, and his instinctive delight in ordered arrangement is satisfied.

Babies have always been soothed and comforted by swaying and rocking, and the young child's delight in dancing and moving to the rhythm of music must be satisfied and developed by rhythmic exercise. Rhythmic cradle songs introduce rhythm in sound very early, and throughout the period of infancy songs, rhymes, jingles and singing games should be included in the activities of the school. The percussion band, too, is a source of pleasure to the children, and is a means whereby they may learn to keep time and to fit in with a rhythm.

The recognition of rhythm in space usually takes place about the age of six and a half to seven, and pattern arrangement soon appears to decorate constructions. Stick printing, paper folding and cutting, painting and chalking are some of the means by which this interest may be expressed.

At first we find that the play of a little child is essentially individual and non-social, though the two-year-olds will probably be interested in watching the play of others. The child of three years of age shows progress in this direction, and the amount of group play steadily increases as the years go by if the companionship of other children is freely offered.

In infancy group play is often the occasion for tussles between children, for they have to learn to control their self-assertiveness and to respect the rights of others. Sometimes physical danger and a need for protection makes it inevitable that the teacher should intervene, and when this happens she must show the combatants that she understands and sympathizes with both points of view, while steadfastly upholding the standards of fairness, kindness or helpfulness to which she herself, as an adult, owes allegiance. For adult social and moral standards, born of mature experience, are forces in the children's environment, and when encountered are examined and tested, and their value and worth estimated through experience. The statement by a trusted adult that one doesn't kick or push one's fellow-workers, accompanied by amazement at such folly, is, however, often sufficient to check aggressive behaviour in the group. Continued experience of group membership will also give exercise

in self-discipline, for even in infancy the approval of the group is desired, and it is so very unmistakably withheld if one continues to be a nuisance and to spoil the play of others.

Play in its various forms is the absorbing business of a little child's life, and if, in early years, any of the various aspects of play are lacking, the childish desire underlying that type of play tends to persist throughout later life. The adult continues to seek the same form of outlet, and full development is impossible. It is surely high time for us to give play its true place in the early education of children, and to show our faith in the principle that books can never teach what toys inculcate.

## *Chapter 9*

### LANGUAGE LEARNING

(INCLUDING THE PRE-LESSON STAGE IN READING AND WRITING)

DURING infancy a little child not only has to establish and exercise his motor and sensory powers, but also to learn a language. This last is one of his greatest achievements in early years, and it includes learning to understand spoken language, and learning to use it freely to express his own thoughts. To do this the child must learn to control the movements necessary for clear articulation of the various sounds of his native language. The young child is responsive to auditory stimuli: a very loud noise terrifies him: and even when he is older the sudden "hoot" of a steamer will sometimes call forth a flood of tears. Quite early he notices and attends to sound in his environment, and in time begins to imitate the sounds he hears, amongst which, of course, are the sounds of speech.

The apprehension of the idea of language as the expression of some thought or idea in sound comes gradually to a child, and before he can talk he associates the sound-patterns he hears with the thought and meanings that seem to go with them. Such sound-patterns as "All gone!" "Not in mouth!" "Up she goes!" are soon related and their meanings understood. Quite early, too, he learns to associate a particular sound with a particular act, and responds appropriately to such requests as "Wave your hand!" "Throw a kiss to Granny!" "Clap hands!" By means of babbling and gurgling a baby exercises his



vocal organs and practises the movements necessary to articulate words and sentences. This sound-making is at first largely without meaning, but later on the sound-patterns heard are imitated and repeated, and are used again and again with the meaning that seems to attach to them. This last step demands much effort, and its rate of development varies very much in different children. No attempt to force the pace, by overmuch directed practice, should be made, and we must remember that the power to utter a sound spontaneously does not necessarily include the power to utter it voluntarily. "It often happens when something is said for imitation and the child observes attentively my lips, that evident attempts are made at imitation; but for the most part something different makes its appearance or else a silent movement of the lips."<sup>1</sup> The power to reproduce sounds correctly can only grow through practice, and the forms of phrases are learnt by the process of repetition and questioning. A little child will often ask a question in order to hear once again the phrase in which the answer is given, and so get to know it better.

At first a child does not understand the exact meanings of particular words, but he gets to know the general drift of what is said. When the same sound is constantly heard and used in different settings it is finally related to that which is common to all settings, and a real understanding of particular words begins. Between the years of two and five children are learning to talk, and they use many made-up words. "We went in a boat and Daddy rew!" was the excited

<sup>1</sup> Preyer.

remark made by a small boy on returning to his home, and "I knowed!" "I heard!" and "I seed!" are familiar words to those who have been the companions of little children. Incorrect associations of names with things are also sometimes made, for new words are generally learnt in connection with some complex experience, and the child may easily attach them to the wrong elements. For example, a little boy learned the word potato when he saw potatoes picked up with a fork and subsequently, for a time, applied the term potato to a fork.

Much help can be given in the Nursery Schools to children when they are learning language-names and the use of language. We must be careful to name things clearly and repeatedly and should encourage all spontaneous attempts at imitation and conversation. Many good picture-books should be supplied, and we should comment on what is looked at, and listen sympathetically to the children's remarks. In a good home when looking at a picture-book with Baby, the grown-up talks about the picture, and says, "Here is a big cow. Baby say cow?" and when he is so disposed baby repeats the word with much enjoyment. So, in the Nursery School, our remarks are noticed and attended to, the phrases may be imitated and used again by the child, in his own good time. While playing with the great variety of toys and play-materials to be met with in a well-equipped Nursery School, the names of these things are learned naturally by the child, together with the names of any tools he is called upon to use. We help little children, too, by talking to them about their doings, if we take care always to

speaking slowly and distinctly ; and the mere recital of the events of a little child's day told in chronological order gives great delight and is a means of extending experience of language. Such "stories" are told over and over again in a good home, and requests such as, "Tell about when you were a little girl in London," or "Tell about what you used to do on Granny's birthday," are familiar to all who have had much to do with young children. Story-telling, repeating rhymes and singing songs are all ways in which new words may be introduced, understood and most likely used again by the children.

It is during the nursery stage that help can most effectively be given towards developing habits of clear enunciation and of pure intonation, and the greatest factor in the success or non-success of this training is the teacher's own speech. Hence all those preparing to become teachers of young children should give much time to studying how to improve their speech and enunciation, and to cultivating beauty of voice. It is the teacher's usual, everyday speech that will be imitated by the children, and not only the special "pattern" sentences, repeated to a class with careful intonation for the purpose of imitation. The teacher of young children must be able to recognize good speech when she hears it, and be exact in her own speech. She must also be able to diagnose causes of speech characteristics, and to think out ways of modifying these, if necessary. In the early years, however, it is more important to make sure that, at any rate, the children get right sound experiences in school, than to worry overmuch about methods of

correcting speech defects, for it is well known that "those who articulate most correctly form the habits by unanalytical imitation of the words and sentences which are correctly spoken by those about them, and that children who have not had such fortunate speech environment, *still* find their best corrective in the copy set for imitation in the oral practice of the school."<sup>1</sup>

If a language is to be learnt it must be used as well as heard. In the past we imposed silence upon the children in our schools, and discipline was thought to be good when the only sound heard in the classroom was that of the teacher's voice. So we deprived little children of much-needed speech exercise, and even to-day the tradition that conversation between children in school is unnecessary and undesirable has not been entirely swept away. The principle of freedom which underlies nursery education, however, demands that little children should be able to talk whenever their desires and experiences prompt them so to do. Under such conditions alone can a child gain confidence and power in oral expression. The product of a régime which allows a young child to talk only when convenient to the adult in charge is usually timid and halting speech.

As a rule children under five are not such chatter-boxes as the six-year-olds, but gradually the desire to share their discoveries and experiences with others is strengthened and proficiency in the use of language steadily grows throughout infancy, if the right language environment is provided, and if encouragement to talk freely for the greater part of the day is

<sup>1</sup> Huey, *Psychology and Pedagogy of Reading*.

given. The need to speak arises naturally in the young child's play, when exploring, investigating, constructing or dramatizing. Children talk about themselves, what they like to eat and what they like to do and to possess. They play at telephoning, broadcasting, cinemas, shopping, visiting; and language which arises in this way is free and living speech, very different from the lifeless sentences, framed to order, about a topic selected by the teacher in a formal "language" lesson.

For the older children the "morning talk" is a valuable part of the programme. After greeting songs and hymns of thanks are over the children gather their chairs into a circle and free conversation begins. The children tell of interesting doings at home, of happenings to father, mother, brother and sister. Puddings, pets, new clothes, toys—in fact, any interesting object or event may be a topic for conversation. They tell of happenings on the way to school, of the fire-engines, of cranes, of big pools, of umbrellas and gum-boots. They bring things to show to other children and are much interested in the comments made.

Sometimes interesting events happen in the play-room overnight, the tadpoles develop legs, the acorn shows a root, the caddis-fly comes out, or perhaps a new picture or toy is added to the equipment of the room, and these things must be talked about. At Christmas-time visits to toy bazaars are topics of conversation, and toys seen or bought may be described.

The value of such free conversation is plain to see, for it is a means whereby the teacher can get to know



Picture Books.

PLATE XV.



the interests uppermost in the children's minds, as well as an opportunity for practice in oral expression. By this sharing of interests a feeling of community with the rest of the group is fostered and further social training is given. The teacher will constantly need to encourage good manners, for only one person can be heard at a time, and the child must wait for his turn. The talk, of course, is always informal and lasts for no fixed duration of time, frequently merging into some physical activity. For example, when frogs are "news," the desire to imitate their swimming movements may soon disperse the seated group. The younger children are, of course, more interested in seeing and handling things than in hearing about them, and they should be encouraged to bring some tangible "news" to show to the others. Interest is sometimes enriched if the teacher gives information or relates some experience relevant to the subject and likely to be appreciated by the children, but she must beware of turning the period into a teacher's language display. She must also remember that attention goes when interest flags, and must not expect little children to listen patiently to long recitals given in voices which are almost inaudible or which lack variety and dramatic effect.

Natural conversation is also evoked by the display of models of familiar scenes and situations in the playroom. These can be set up on the sand-tray, and the children love to arrange and rearrange the objects to their particular satisfaction, while a stream of comment accompanies their activity. A model of a farm may be built up with inexpensive toys, while



realistic representations of the homes of the "Three Little Pigs" or the house of "The Three Bears" have been constructed many times with odds and ends, and have evoked spontaneous remarks from the most silent child. Looking at picture-books, when a friendly grown-up is near at hand to listen to one's comments, helps conversation, and the older and more fluent talkers enjoy recapitulating stories with which they are familiar.

Six-year-olds can manage small glove puppets, and the rather tongue-tied child will sometimes talk more freely on behalf of his puppet than for himself.

The work of remedying speech-defects should not be undertaken by the unskilled, and in the early years we must refrain from analysing speech into elementary sounds for the purpose of correct articulation. Physiologists have issued grave warnings against the dangerous practice of calling a young child's attention to the particular movements and processes required in speaking before the habit of speech is well established. "This consciousness of the 'how' of speaking arises whenever in reading or talking the thought is directed to anything else than meanings, and brings in its train the abnormal functionings (namely, stammering, stuttering and other signs of nervous strain) that always attend the attempts of consciousness to tamper with processes meant to function automatically."<sup>1</sup>

Right movements for the articulation of certain sounds may be established and practised in the imitative games so much enjoyed by little children. We

<sup>1</sup> Huey, *Psychology and Pedagogy of Reading*.

can be engines and make the "ch, ch, ch," or "t, t, t," sound as we move along a track. We can be dogs and make the panting sound of "h"; or waves, and break upon the shore with a "sh, sh, sh-ing" sound. In play the children can make the sounds for cats, birds, insects and other creatures, wild and tame, or imitate the sounds made by cars, sirens, aeroplanes, telegraph-wires or tube-trains. Rhymes giving practice in making various vowel sounds can be repeated without analysis and give great enjoyment, and games in which familiar salesmen are imitated afford further practice in such cries as, "Evening paper!" "Coal!" "White lime!"

The older children may be encouraged to improve the carrying-power of the voice without strain, by speaking from different positions in a room, and they can be interested in listening to each other's voices at different distances. Also, if free and healthy habits of speech are to be formed the children must take frequent exercise in the open air and must keep the nasal passages clear, for only in this way can natural, healthy breathing be secured.

In time, in addition to expressing his own thoughts and ideas, the little child will desire to read and understand the thoughts of others, as they are recorded in books. Reading has been described as the noblest of arts. "It is the medium by which come to us the loftiest inspirations, the highest ideals, the purest feelings that have been allowed mankind. A God-given gift, indeed, this written word and the power to interpret it."<sup>1</sup> Yet obviously it should not be forced

<sup>1</sup> Huey, *Psychology and Pedagogy of Reading*.

upon a child before his spoken language has become fluent, and while his experience of life is necessarily scanty. When this is done little understanding of what is read can be expected, and reading degenerates into mere word-recognition which has little, if any, educational value.

### *The Pre-lesson Stage in Reading and Writing*

When told that no formal teaching in Reading and Writing was given to children under six and a half years of age a newcomer to the staff of a school, where modern methods of nursery education were in vogue, exclaimed, "But how *do* you fill up the time without?"

The idea that learning to read is a young child's only requirement and that everything else may be left to chance is all too general, and teachers and children in the Infant Schools have been sadly goaded and harried to get on with this work as early as possible.

Yet as long ago as 1927 the Handbook of Suggestions for teachers, issued by the Board of Education, contained the following warning:

"The over-emphasis of the three R's at the expense of other natural desires and interests, which children continue to show throughout the Infants' stage, will defeat its own ends." And again: "Premature concentration on Reading suggests that reading is the only gateway to knowledge and tends to divert attention from the value of direct contact with things as a means of learning." In many cases, however, these suggestions were ignored, and the greater part of the school day was still devoted to formal lessons in the

three R's. Even to-day it is no uncommon sight to see little children struggling to interpret mysterious symbols when their real desires and interests are centred elsewhere and their first-hand experience has been so meagre and scanty that the thoughts expressed in the printed pages have little or no meaning for them.

By such means we encourage "parrot-like, meaningless repetitions" in which words outrun thought, and we help to develop an interest in "the memorized reproduction of things rather than in real things." In addition, children kept in their seats to study when voluntary attention is undeveloped frequently acquire habits of listlessness and mind-wandering that are difficult to overcome afterwards. They read over many times that which does not hold their attention and is not remembered. Lax habits of study are thus acquired. By undue emphasis on early reading we also tend to lessen independence and self-confidence in the individual and help to develop an excessive reverence for the printed word and a consequent distrust of the results of direct exploration and experience. Over and over again it has been said that the period of infancy is a time for direct exploration of the immediate environment and for learning by direct experience. It must, therefore, be acknowledged in practice as well as in theory that there is no place for the formal teaching of Reading and Writing in the nursery years. This rightly belongs to what is usually called the transition stage between six and eight years.

This point of view should not, however, be taken to imply that the three R's are unimportant matters in

education. The ability to read is obviously a universal need in modern civilized life ; and opportunities for gaining it must be secured for every child. What needs to be stressed, however, is the obvious truth that the process of reading is a means to an end and not an end in itself. The end is understanding of the thoughts and ideas of others, and spoken language is the appropriate means of attaining this end in the early years. In this, as in all other developments, we should wait upon interests and desires, and refrain from teaching Reading before the need to interpret printed language has awakened.

Towards the end of infancy, however, a gradual change begins to appear and the child reaches out for knowledge and experience that cannot be obtained directly. This leads to the continual questioning so hardly borne by the busy adult in the home, and to a keen interest in stories read and told to him. Except in the case of the very poor, most children to-day find themselves in an environment of books, papers, notices, ubiquitous as the spoken word. Stories and letters are read to them from written and printed pages and they soon realize that new ideas and interesting experiences can be got from these. So naturally they begin to attend to the printed words around them and ask " What does it say ? " A spontaneous interest in reading arises, and this interest is the most powerful aid in learning to read that a little child can possess. Above all things, we must guard against killing its tender growth by too early teaching about the processes of word building and about sounds and letters, for these things are the result of centuries of adult

thought and analysis and have no real meaning to a little child.

Of late years much colourful apparatus and many tricks and devices have been thought out by adults to aid young children in learning the sounds associated with letters, and in uniting these to form words. By such practices we tend to treat the child as an unwilling partner in the business of acquiring the art of reading, whereas his natural interest in reading, arising in the course of his general development, can best be fostered by securing that all his early efforts to associate thought with written symbols are rewarded by the getting of meaningful and interesting experiences, which fill him with joy and satisfaction.

The children in cultured homes early make acquaintance with books, but even in such circumstances parents are often over-anxious about reading and tend to try to force the pace for development and natural growth. Hence we get children in "difficulties" about learning to read.

In free and happy surroundings a little child usually attends first to books and papers that have pictures in them, and learns to pick these out from others by some characteristic mark of colour, shape, size or intention. He looks at his favourite pictures again and again and asks to hear the accompanying reading matter. He hears this many times and it becomes so familiar that he can repeat it by heart, and he will sometimes pretend to read from the book, this being a step farther than the imitation of reading which frequently takes place earlier when meaningless sounds are gabbled by the tiny holder of an open book.

The child, too, often asks to be shown where certain interesting phrases and sentences are to be found, and after an adult has pointed to and repeated a phrase, he, too, will point while he says the words. The teacher's business in such cases is clear. She must provide printed records of well-loved stories, rhymes and jingles, and the child, seldom tired of hearing good things over and over again, will point to and repeat the printed sentences. In time many sentences and phrases become associated in his mind with their written forms.

Driven by a strong desire to get ever more thoughts and ideas the child will try to make out meanings of new notices, rhymes and stories, and helped by suggestions and by pictures it is often surprising how much will be interpreted. In such ways he gets to know the written form of many words and sentences, and continues to use these to find out the meaning of more and more new matter. Very little formal teaching is likely to be needed after such an approach. As acquaintance with printed matter increases, attention is soon directed to likenesses and differences in words; and analysis into syllables and letters, and exercise in word building later follow quite naturally, and prove interesting to the young readers.

Not all children, however, have easy access to books and kindly helpers in their homes, and the community nursery must make good these deficiencies. Picture books with simple and appropriate reading matter must be plentifully supplied and the children be encouraged to look at these, while their comments and enquiries are sympathetically received. Stories

may sometimes be read and the books from which they are taken be examined by the children.

Once a little child's attention begins to be directed to written symbols, he is interested in seeing the printed image for any familiar thing or thought. In towns to-day printed symbols can rarely be escaped. "Bus Stop," "Car Park," "No Entry," "Used Tickets," "Drive Slowly" and such notices are part of almost every child's environment and are necessary in his play for realistic representations of life. Labels for goods in play shops, forms of greeting, names for bus or train routes, are all likely to be asked for and should be given.

Well-known and much-loved rhymes can be printed and illustrated as wall decorations ; and some children will repeat these, while pointing, and the written pattern will impress itself in this happy association.

Accounts of the child's own doings interest him, and his free drawings often call for a title. The scrapbook he makes becomes more interesting when a name or phrase is printed for him beneath each picture, and is looked at again and again. Further associations with printed images are thus made. It is fun, too, to receive directions in a written form, and the words "sit, stand, bow, jump, clap, sing, dance, stamp" and many others are learnt by practice in suiting the action to the word.

In his own time the child will begin to analyse sentences and words, and alphabet letter blocks, A.B.C. books and boxes of letters are playthings which still attract some children. We should tell them the names of these when they are asked for, and some will



early take pleasure in arranging words and even letters to match familiar phrases and notices, which practice seems to be an aid to later spelling. In the pre-lesson stage, any attention to written matter should arise incidentally in the individual child's play interests and desires, and we must be prepared for the reading interest to develop earlier in some children than in others. We must refrain from teaching before enquiry is aroused and be content for the child at first to be able to interpret known and interesting matter before we expect him to interpret everything. Association of written forms with thought, and not simply word recognition, should control the rate of advance.

Side by side with reading goes writing ; in fact, the desire to write sometimes appears before the desire to read. Writing presents little difficulty to children, provided they are not called upon to perform it at too early a stage. Madame Montessori pointed out that the art of writing must wait upon the development of the power to co-ordinate two different groups of movements, namely, the movements required for holding and guiding a pencil or pen, and those necessary in forming the letter shapes. Control of pencil and chalk is best gained in free drawing, but practice in drawing around and within inset forms and frames of geometrical shapes, as supplied in the Montessori apparatus, or shapes of familiar objects, such as animals, fruits, leaves or balls is found pleasurable by many four-year-olds and they enjoy colouring the forms produced with firm strokes in chalk and crayon. In order to learn the shapes of the letters and to establish a muscular memory of the movements

required to form them, Madame Montessori devised sandpaper letters. These were to be traced with the index finger by the child, first with open eyes, and next with closed eyes, the different surface telling the child if he traced incorrectly. The visual, tactile and muscular sensations from each letter shape would thus be received, and the movements needed to form these remembered.

A little child's natural approach to writing, however, is usually in direct imitation of the act performed by other people. At first it is just scribble movement produced without any particular meaning attached. Quite early scribble letters are sent to any member of the family who may be absent from home, and soon a X is laboriously made to represent a kiss. The young child should be encouraged to scribble, for in so doing, he exercises motor powers and practises movements necessary for making the letter forms. A natural delight in repetition urges him to repeat these movements over and over again, and soon they are performed with ease, and writing is made much easier when formal practice begins. A need for signs and labels will cause the child tradesman to copy these like a freehand drawing. For example, a small girl, not yet able to read, spent a Saturday morning writing "Tea 6d." on pieces of paper to serve as tickets for the school bazaar.

In time an interest in certain letter forms arises, such as M, m, Mummy's letter, and in other initial letters, and sand, sandpaper or other raised letters may usefully be included in nursery apparatus, so that large letter forms may be traced and practised, when

this is felt to be desirable by the children themselves.

In infancy a child's eye is long-sighted, and considerable strain is involved in seeing things near at hand: also writing in pencil on lines calls for much control over the small muscles of the hand, which should not be demanded in these early years. Wall blackboards or large sheets of paper fastened on easel stands should be supplied for early efforts in writing, and large movements practised, first with paint and chalk, and then with a soft thick B.B. pencil. Writing which arises incidentally in play and is initiated by the child himself will be practised without strain, but formal practice is obviously unsuitable for any child under six and a half.

“Reading and writing came late to the race and should not be hurried in the child. To make him read and write first is like insisting that he walk before he creep.”<sup>1</sup>

<sup>1</sup> Huey, *Psychology and Pedagogy of Reading*.

## *Chapter 10*

### THE PRE-LESSON STAGE IN NUMBER

To the statement "that nine-tenths of those who dislike Arithmetic or feel that they have no aptitude for it owe this misfortune to wrong teaching in the early stages," many teachers would add "or to too early teaching in this subject." Man must possess a certain amount of mathematical knowledge to play his part fully in civilized life. He must attend to quantity, and because such study is of both cultural and practical value to the student, we find a large share of time and attention allotted to it in the schools.

During the Junior School stage, particular stress is laid upon that branch of mathematics called Arithmetic, and in preparation for this we find periods set apart for "number lessons," "number occupations" or "number games" in the programme of many Infant Schools. Of late years a profusion of individual apparatus has been devised to aid little children in making number calculations, and while much of the apparatus and some few of the so-called number games are helpful, it is impossible not to feel that the activity engendered by them is often very artificial and is neither an expression of spontaneous effort nor a means of satisfying real enquiry. It is generally found that where many tricks and devices are used in teaching, the pupil is not ready for the subject-matter taught, and does not need it to carry on his present business of living.

In his earliest years a child has no real need to quantify that which surrounds him. The processes of counting and measuring were evolved by man in

response to a felt limitation of material, time or power, and a very little child is aware of no such limit. That which he receives comes to him without effort of will on his part, out of the vague spaciousness and abundance around him, but sooner or later experience teaches him that material things, time and power are not unlimited. "No more, all gone!" "One for baby, one for me!" "Not now, after dinner!" "Time to clear up!" "Time to go home!" are all verbal expressions of situations in which a little child experiences limitation and begins to realize that he cannot have all the good things, but must share with others, and that his desires must often wait upon an ordered time for their fulfilment. At first, closely related to real things and particular situations, vague ideas, such as are expressed by the terms, *more, less, all, some, one, many, now, after*, gradually begin to form in the child's mind. But so long as he is content with things as they are, is satisfied to manipulate and handle materials without thinking of them as a means towards a definite end, and to toddle and run towards no particular goal, the quantitative aspect of his surroundings remains unconsidered. It has been pointed out that in the later years of infancy, from about five years and onwards, a child's activities gradually become more objective, and somewhat vague purposes begin to be formulated. In order to achieve these purposes the child gradually begins to order his present actions, and directly this happens, quantifying, or rough measurement for a purpose, must occur. "The conscious adjusting of means to end, particularly such an adjusting as requires com-

parison of different means to pick out the fittest, is the source of all quantitative ideas.”<sup>1</sup>

With bricks the child builds a tower, a house or a staircase ; with clay he models a garden, an aeroplane or a boat with oars ; with beads he threads a chain or necklace, and in order to achieve these ends he is forced to compare and make selections. He chooses one object rather than the others because it will serve his purpose best. The heaviest brick becomes the base of his tower, the largest bead the centre of the necklace, and more clay for the boat than for the oars will need to be broken. Thus, relations such as are expressed by the terms *larger*, *smaller*, *heavier*, *lighter*, and many others, begin to be attended to in a variety of situations. When the child's mind is sufficiently mature these ideas, all of which are vague quantitative ideas, are conceived and can be thought of without particular objects being present.

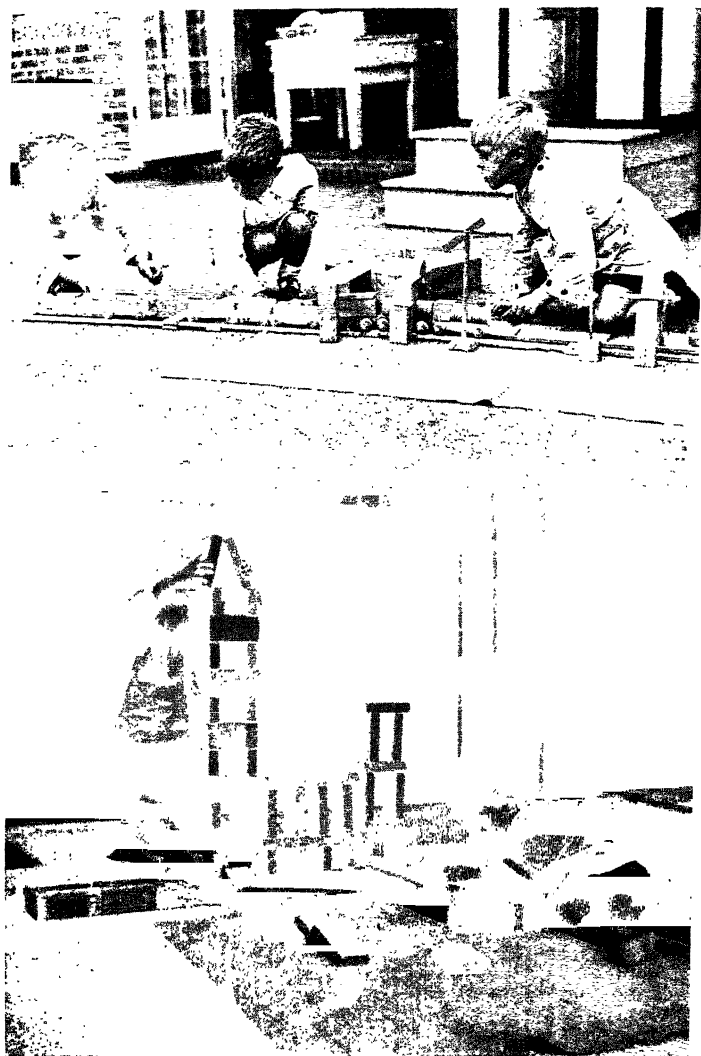
A teacher cannot put this power to think abstractly into the child's mind, for it has to grow and develop in its own good time, but she can help to promote its development. First of all, she must supply a still greater variety in playthings and materials than was needed earlier so that ever more purposes are likely to begin to be formulated and achieved and consequently more comparison and selection will become necessary.

Until without effort a child makes discriminations and selections such as are expressed by such terms as *farther*, *heavier* and *longer* he is not ready to make the exact discriminations which are expressed by such terms as *twice*, *thrice*, *half* and *one-third*. Play-materials

<sup>1</sup> McLellan and Dewey.

supplied should include groups of objects between which relations in shape, size, weight, capacity and measurement are noticeable. Some of the Montessori Didactic Apparatus, such as the Long Stair, the Broad Stair and the Pink Tower, and similar play-things devised by educational publishers, call for much comparison and discrimination when put to use by the children. The teacher's business is simply to give them opportunities to manipulate and arrange these things, to make constructions with them in their own way, to use correctly the mathematical terms involved, and to secure that each one is allowed the time he needs to discover the relations for himself.

Vague quantitative ideas will not, however, be sufficient to serve the child when his plays and activities become more complex and more realistic. If Jim is asked to set a table for dinner it is not enough to take *some* forks and spoons: he must count exactly how many are needed. If he wants to cover a match-box in coloured paper to improve some effort in constructive work, it is not enough to stick on *some* paper: he must measure the sides of the box with the paper and cut covers to fit exactly. Exact quantitative and numerical ideas are built up gradually by a child through his own activity in purposeful counting and measuring, and like any other abstract ideas cannot be given to him. In the past we have often failed to recognize this truth. We have tried to impart that which an individual must find out for himself, and too often have defeated our educational purposes by burdening children's memories with numerical facts and statements, the truth of which they were unable



The Railway Train.  
Building with Bricks.

PLATE XVI.





to recognize. Such parrot work obstructs the pathway to true mathematical knowledge, and sometimes it has been found that greater progress in number occurs in holiday times than in term time, for natural mental growth is not overstrained or disturbed by formal teaching of that which cannot be taught.

In the *Psychology of Number*, Dewey and McLellan point out that "to get exact quantitative ideas the mind must follow Nature's law, must measure quantity, must break it into parts until it recognizes the one as many and the many as one." When we count or measure, a selected measurer is repeated to form the whole quantity. The selected measurer for "a group of chairs," is "a chair," and we count the number of repeats of the measurer. The selected measure for a pail of milk, a continuous quantity which is not separated into units each usable by itself, may be a pint or half-pint, and the number of repeats is counted.

The mind process for both counting and measuring is the same. Measuring implies counting but usually involves more physical activity. In order to encourage the child to count and measure the teacher must supply a variety of playthings, which lend themselves to enumeration, and groups of objects, whose relative magnitude and exact numerical relation may be easily discovered. Beans, sticks, reels, shells, counters, blocks of the same size and shape, packs of cards, dominoes and skittles should be provided. Froebel's building gifts and the larger wooden solids described in Speers' *Arithmetics* (Primary Book One), rods, tablets and other magnitudes exemplifying

simple number relations, such as a half, a third, twice, a quarter, two-thirds, three-quarters, twice, thrice, four times, are also stimulating to the number interest, when put to use by children in their play. Pots and pails of different sizes to fill and empty with water or sand, together with exact pint, half-pint and gill measures, measures of a yard, half a yard and a foot, and a clock face with movable hands, will probably promote the growth of number ideas if we will but give the children time to play with them and leisure to think, ponder and make discoveries.

A little child sees the physical activities of weighing and measuring going on in the world around him and soon has some experience of these himself. His little foot is measured for shoes, his arm for sleeves, and he frequently hears people counting the repeats of a measurer, when the clock strikes, when music is played or when scores for skipping or ball throwing are kept by older children. It is good for the little ones to hear counting, and they take great pleasure in its rhythmic regularity. If one walks into a room full of noisy infants, it is often easy to restore peace and quiet by beginning to count them aloud one by one. So we may count the steps as we walk with the little one up or downstairs, or the buttons that are fastened on his gaiters. Many nursery rhymes and games appeal to this interest and pleasure, such as "One, two, buckle my shoe ; three, four, shut the door " ; or " One, two, three, four, five ; catching fishes all alive " ; and these and many like them are heard and repeated by the little ones long before they can really count, that is, before they realize that there is an exact

correspondence between the number words and the quantitative aspect of the objects counted. They serve, however, to introduce this ordered series of sounds in a pleasurable way; while in games, such as "This little pig went to market" and the finger plays such as "Mrs. Pussy, sleek and fat, with her kittens four,"<sup>1</sup> actions are suited to the words and small number groups are often perceptually recognized before the true nature of number, as an outcome of the measuring process, is realized.

The most natural approach to true measurement, and so to ideas of exact quantitative relations, is, of course, made in constructive work with material, for directly anyone begins to make anything he is forced to measure, at first perhaps roughly, but later more accurately, in order to achieve his purpose. Far more real mathematical knowledge is derived from such work than from countless questionings about magnitudes and quantities, supplied by a teacher, for comparison and measurement. When making a home for the Three Bears, it was soon found necessary to measure, for the height of the door had to be compared with that of Father Bear. Beds and chairs had to be compared and graded in size to suit Father, Mother and Baby, and suitable boxes and reels needed to be selected. The Bears served as measurers, and since it would have been most uncomfortable for the length of the bed to be but one repeat of the measurer a suitable extension had to be estimated and allowed for. Baby Bear and Goldilocks had to be made exactly the same size, for his possessions were just

<sup>1</sup> Emilie Poulsson.

right for her, and to have two measurers was found to be a great convenience. The long waiting for the use of Father and Mother Bear would perhaps help to bring about some realization of the need and convenience of a standard unit of measurement !

Such a piece of work, of course, would not be undertaken by very little children, but even in the early occupations of building and modelling in paper, sand or clay, a need to put like with like, to add and take away, to count the repeats of a measurer, and to perform physical acts of halving and quartering will arise over and over again and will be performed with real understanding.

During the nursery years the teacher's aim is to keep alive the child's early interest and pleasure in numbering. She must watch progress, admire and praise the little ones' efforts at counting and measuring, and sometimes, but not too often, suggest activities. Most psychological authorities to-day are agreed that formal number lessons, by which is meant lessons in which the investigation of number is the predominant interest, should not be given before the mental age of six and a half years is reached. Earlier than this the attention given to number should be such as is called for incidentally in the plays and games which little children enter upon spontaneously. But although no formal lessons are given, a great deal of number knowledge is usually gained by the time a child reaches the mental age of six and a half, if he has been left to play freely with suitable toys and materials, and if friendly grown-ups have been at hand ready and willing to answer enquiries. As a rule he will count

as well as, and in many cases even better than, children of the same age who have had formal lessons every day over a long period, for he has counted when a real need to do so has arisen in his play activities and has kept to the rate of progress in thinking natural and possible to him.

In number, perhaps more than in any other work, the attempts to inculcate what Professor Whitehead calls "inert ideas," which do nothing "to illuminate and guide" present experiences, persist in the Infant Schools. While many realize that number ideas are the outcome of the processes of measuring and counting for a purpose, they forget that which is essential if growth in real power to think is to be secured, namely, that the purpose must be realized and desired by the individual who is called upon to count. Even to-day a great deal of the number work undertaken with infants has no immediate value for the children. Much time, too, is spent by teachers in devising picture puzzle cards to promote counting and to stir the child to make number calculations which he will not put to practical use, while such activities as the purposeful counting of chairs, chalks, brushes, papers and boxes, the distribution of materials for handwork, and the apportioning of space to individuals on wall blackboards are all performed by the teacher herself.

A small boy one day appeared to be unwilling to attend school, and it was found that "sums" were the bugbear frightening him. Finally, he said, "Well, you see, Mummy, there's a thing called the answer, and I don't seem able to get it!" If number work is of such an arbitrary nature and has so little reality to

a little child, the result is fogginess of thought and a weakening of self-confidence in regard to mathematics which may last throughout life. \*

As part of the self-chosen and undirected activity in the Nursery School, opportunities for counting, arranging and sharing will occur and should be utilized. The physical activities which give rise to the mental process of addition, subtraction, multiplication (repeated addition) and division (sharing and grouping) will be called for over and over again when the children are dealing with material. A part of the day in the Nursery and Infant Schools is often taken up by games, romps and all kinds of physical activities, and in these much number experience may be gained. The children play traditional games, such as Nuts and May, and Tug-of-War, which depend on number for their interest and in which, for fairness, sides must be counted and balanced. Little children enjoy singing and marching games, such as "Here we go marching one by one, two by two," "One fair maid a-dancing, two fair maids a-dancing," and easily learn to fit the actions to the words. Rhythmic movement to suit music played is another pleasurable form of exercise. The children clap and stamp to the pulse of the measure and count the beats. Jumping, skipping and ball throwing often stimulate efforts at counting, and in such games as skittles, quoits, race games, snakes and ladders, much of the interest depends upon the score. Other games which give help and practice in number are Go-bang, Twinks, Ludo and Beggar-my-Neighbour. Play with such toys as bricks, beads, dolls' houses and furnishings, trains and soldiers,

usually call for counting : and in dramatic representation of everyday life more and more counting and calculating has to be done as the play becomes more realistic. When playing at shopping, keeping house or school, going on tram or train journeys, attention to number is constantly called for, and the activities of weighing and measuring length or capacity are performed with much earnestness by the little tradesmen. " Price " and " change " must also be attended to as the play becomes more complex and ideas of money values begin to be formed.

The temptation to interfere in the children's dramatic plays and to force attention to number must be firmly resisted by the too zealous teacher. If a bus game is on hand, we should not ask the conductor how much more money he takes from one side than from the other, for this does not matter, and is only an annoyance to him in his game, but it is, of course, permissible to say, " How many tickets will you want for your bus ? Come and take them from this pile."

Between five and six, children are often much occupied in constructive work with material. They furnish and appoint dolls' houses ; they measure and cut coverings for the dolly's bed ; they make gardens and garages and many other things, and in so doing they are forced to adapt their material to the end in view, and a need arises to compare, measure and count accurately. They are also frequently engaged in co-operating in school, class and home activities. They are busy setting tables for meals, cleaning silver for the table, measuring paper covers to protect table-tops



when sticky and dirty work is being done, distributing play materials, serving and apportioning food and drink, dividing earth and fibre for planting bulbs and seeds, setting boundaries for garden plots, and so are continually called upon to measure and count for clearly realized purposes.

Counting and measuring go on in the everyday life surrounding a little child and the number symbols are everywhere to be seen. He, therefore, soon begins to use these symbols in his play. The houses in the street he has built must be numbered. He affixes numbers to his bus and motor-car, and the ideas for which these symbols stand grow gradually through practice in purposeful counting. It is most important to remember that children vary very much in their capacity to grasp number ideas. Hence, each individual must be allowed to progress at his own rate and neither be harried to keep up with quicker workers nor be forced to keep pace with those slower than himself.

During the pre-lesson stage, if the foregoing suggestions are followed, it is possible that the numerical ideas gained in the child's undirected play may be expressed in such terms as—equal, a half, twice, three times, four times, a quarter, three-quarters, a third, two-thirds, yard, foot, inch, pound, half-pound, pint, quart, hour, half-hour, quarter-hour. The children will also probably have learned to relate magnitudes to certain money values such as 1*d.*,  $\frac{1}{2}$ *d.*,  $\frac{1}{4}$ *d.*, 1*s.*, 6*d.*, 3*d.*, £1, 10*s.* All this knowledge will have been acquired without forcing. "Since learning to count and measure is a natural step in man's development

from savagery to civilization, it would seem to be contrary to the beautiful economy of nature if the mind had to be *forced* to the acquisition of that knowledge and power which are essential to individual and racial development : in other words, if the conditions of progress involved other conditions which tend to retard progress.”<sup>1</sup>

Indeed, in all aspects of early education, training should follow and not forestall the creative process of growth within each living individual. It is by the widespread adoption of this fundamental Nursery School principle, both in homes and in reorganized Infant Schools, that the healthy and harmonious many-sided development of little children will be encouraged ; and thus there will at last be secured sure and effective foundations for the national health and educational services.

<sup>1</sup> Dewey and McLellan, *Psychology of Number*.

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